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April 17, 2019

# **Q1 2019**

# Financial information

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# Financial Information

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## Key Figures

(\$ in millions, unless otherwise indicated)	Q1 2019	Q1 2018	CHANGE	
			US\$	Comparable <sup>(1)</sup>
Orders	7,613	7,555	1%	3%
Order backlog (end March)	13,853	13,624	2%	6%
Revenues	6,847	6,441	6%	4%
Income from operations	590	626	-6%	
Operational EBITA <sup>(1)</sup>	766	752	2%	10% <sup>(2)</sup>
as % of operational revenues <sup>(1)</sup>	11.2%	11.7%	-0.5 pts	
Income from continuing operations, net of tax	415	414	0%	
Net income attributable to ABB	535	572	-6%	
Basic earnings per share from continuing operations (\$)	0.19	0.19	0% <sup>(3)</sup>	
Basic earnings per share (\$)	0.25	0.27	-6% <sup>(3)</sup>	
Operational earnings per share <sup>(1)</sup> (\$)	0.31	0.31	-3% <sup>(3)</sup>	5% <sup>(3)</sup>
Cash flow from operating activities <sup>(4)</sup>	(256)	(518)		

(1) For a reconciliation of non-GAAP measures see "[Supplemental Reconciliations and Definitions](#)" on page 33.

(2) Constant currency (not adjusted for portfolio changes).

(3) Earnings per share growth rates are computed using unrounded amounts. Comparable Operational earnings per share growth is in constant currency (2014 foreign exchange rates and not adjusted for changes in the business portfolio).

(4) Cash flow from operating activities includes both continuing and discontinued operations.



		CHANGE				
(\$ in millions, unless otherwise indicated)		Q1 2019	Q1 2018	US\$	Local	Comparable
<b>Orders</b>	<b>ABB Group</b>	<b>7,613</b>	<b>7,555</b>	<b>1%</b>	<b>7%</b>	<b>3%</b>
	Electrification Products	3,363	2,786	21%	28%	6%
	Industrial Automation	1,884	2,117	-11%	-5%	-5%
	Robotics and Motion	2,545	2,579	-1%	5%	5%
	<i>Corporate and Other (incl. inter-division eliminations)</i>	(179)	73			
<b>Third-party base orders</b>	<b>ABB Group</b>	<b>7,304</b>	<b>6,759</b>	<b>8%</b>	<b>15%</b>	<b>6%</b>
	Electrification Products	3,227	2,647	22%	29%	5%
	Industrial Automation	1,796	1,787	1%	7%	7%
	Robotics and Motion	2,273	2,313	-2%	4%	4%
	<i>Corporate and Other</i>	8	12			
<b>Order backlog (end March)</b>	<b>ABB Group</b>	<b>13,853</b>	<b>13,624</b>	<b>2%</b>	<b>9%</b>	<b>6%</b>
	Electrification Products	4,394	3,441	28%	36%	6%
	Industrial Automation	5,297	5,595	-5%	2%	2%
	Robotics and Motion	4,341	4,261	2%	9%	9%
	<i>Corporate and Other (incl. inter-division eliminations)</i>	(179)	327			
<b>Revenues</b>	<b>ABB Group</b>	<b>6,847</b>	<b>6,441</b>	<b>6%</b>	<b>13%</b>	<b>4%</b>
	Electrification Products	3,057	2,494	23%	30%	5%
	Industrial Automation	1,738	1,859	-7%	0%	0%
	Robotics and Motion	2,229	2,209	1%	7%	7%
	<i>Corporate and Other (incl. inter-division eliminations)</i>	(177)	(121)			
<b>Income from operations</b>	<b>ABB Group</b>	<b>590</b>	<b>626</b>			
	Electrification Products	297	325			
	Industrial Automation	198	237			
	Robotics and Motion	325	313			
	<i>Corporate and Other (incl. inter-division eliminations)</i>	(230)	(249)			
<b>Income from operations %</b>	<b>ABB Group</b>	<b>8.6%</b>	<b>9.7%</b>			
	Electrification Products	9.7%	13.0%			
	Industrial Automation	11.4%	12.7%			
	Robotics and Motion	14.6%	14.2%			
<b>Operational EBITA</b>	<b>ABB Group</b>	<b>766</b>	<b>752</b>	<b>2%</b>	<b>10%</b>	
	Electrification Products	377	377	0%	8%	
	Industrial Automation	226	262	-14%	-8%	
	Robotics and Motion	337	338	0%	6%	
	<i>Corporate and Other<sup>(1)</sup> (incl. inter-division eliminations)</i>	(174)	(225)			
<b>Operational EBITA %</b>	<b>ABB Group</b>	<b>11.2%</b>	<b>11.7%</b>			
	Electrification Products	12.4%	15.2%			
	Industrial Automation	13.0%	14.1%			
	Robotics and Motion	15.1%	15.3%			
<b>Cash flow from operating activities</b>	<b>ABB Group</b>	<b>(256)</b>	<b>(518)</b>			
	Electrification Products	(2)	81			
	Industrial Automation	40	79			
	Robotics and Motion	175	73			
	<i>Corporate and Other (incl. inter-division eliminations)</i>	(310)	(598)			
	<i>Discontinued operations</i>	(159)	(153)			

(1) Corporate and Other includes Stranded corporate costs of \$67 million and \$76 million for the three months ended March 31, 2019 and 2018, respectively.

## Operational EBITA

(\$ in millions, unless otherwise indicated)	ABB		Electrification Products		Industrial Automation		Robotics and Motion	
	Q1 19	Q1 18	Q1 19	Q1 18	Q1 19	Q1 18	Q1 19	Q1 18
<b>Revenues</b>	<b>6,847</b>	<b>6,441</b>	<b>3,057</b>	<b>2,494</b>	<b>1,738</b>	<b>1,859</b>	<b>2,229</b>	<b>2,209</b>
FX/commodity timing differences in total revenues	(11)	(1)	(5)	(6)	(1)	(1)	(4)	1
<b>Operational revenues</b>	<b>6,836</b>	<b>6,440</b>	<b>3,052</b>	<b>2,488</b>	<b>1,737</b>	<b>1,858</b>	<b>2,225</b>	<b>2,210</b>
<b>Income from operations</b>	<b>590</b>	<b>626</b>	<b>297</b>	<b>325</b>	<b>198</b>	<b>237</b>	<b>325</b>	<b>313</b>
Acquisition-related amortization	68	63	29	20	20	23	14	16
Restructuring, related and implementation costs	68	7	40	4	5	2	3	4
Changes in obligations related to divested businesses	3	7	–	–	–	–	–	–
Gains and losses from sale of businesses	1	6	1	–	–	3	–	–
Acquisition- and divestment-related expenses and integration costs	24	25	22	24	–	1	–	–
Certain other non-operational items	33	5	1	(2)	2	–	3	1
FX/commodity timing differences in income from operations	(21)	13	(13)	6	1	(4)	(8)	4
<b>Operational EBITA</b>	<b>766</b>	<b>752</b>	<b>377</b>	<b>377</b>	<b>226</b>	<b>262</b>	<b>337</b>	<b>338</b>
<b>Operational EBITA margin (%)</b>	<b>11.2%</b>	<b>11.7%</b>	<b>12.4%</b>	<b>15.2%</b>	<b>13.0%</b>	<b>14.1%</b>	<b>15.1%</b>	<b>15.3%</b>

## Depreciation and Amortization

(\$ in millions)	ABB		Electrification Products		Industrial Automation		Robotics and Motion	
	Q1 19	Q1 18	Q1 19	Q1 18	Q1 19	Q1 18	Q1 19	Q1 18
Depreciation	144	141	65	52	17	17	34	35
Amortization	87	75	37	23	21	24	16	17
including total acquisition-related amortization of:	68	63	29	20	20	23	14	16

## Orders received and revenues by region

(\$ in millions, unless otherwise indicated)	Orders received			CHANGE			Revenues			CHANGE		
	Q1 19	Q1 18	US\$	Local	Com- parable		Q1 19	Q1 18	US\$	Local	Com- parable	
Europe	2,781	3,026	-8%	0%	-3%		2,447	2,476	-1%	8%	4%	
The Americas	2,232	1,746	28%	31%	9%		2,198	1,719	28%	31%	6%	
Asia, Middle East and Africa	2,541	2,720	-7%	-2%	5%		2,149	2,187	-2%	4%	2%	
Intersegment orders/revenues <sup>(1)</sup>	59	63					53	59				
<b>ABB Group</b>	<b>7,613</b>	<b>7,555</b>	<b>1%</b>	<b>7%</b>	<b>3%</b>		<b>6,847</b>	<b>6,441</b>	<b>6%</b>	<b>13%</b>	<b>4%</b>	

(1) Intersegment orders/revenues include sales to the Power Grids business which is presented as discontinued operations and are not eliminated from Total orders/revenues.

# Consolidated Financial Information

## ABB Ltd Interim Consolidated Income Statements (unaudited)

(\$ in millions, except per share data in \$)	Three months ended	
	Mar. 31, 2019	Mar. 31, 2018
Sales of products	5,560	5,227
Sales of services and other	1,287	1,214
<b>Total revenues</b>	<b>6,847</b>	<b>6,441</b>
Cost of sales of products	(3,877)	(3,598)
Cost of services and other	(761)	(716)
<b>Total cost of sales</b>	<b>(4,638)</b>	<b>(4,314)</b>
<b>Gross profit</b>	<b>2,209</b>	<b>2,127</b>
Selling, general and administrative expenses	(1,355)	(1,245)
Non-order related research and development expenses	(285)	(273)
Other income (expense), net	21	17
<b>Income from operations</b>	<b>590</b>	<b>626</b>
Interest and dividend income	19	22
Interest and other finance expense	(62)	(89)
Non-operational pension (cost) credit	23	27
<b>Income from continuing operations before taxes</b>	<b>570</b>	<b>586</b>
Provision for taxes	(155)	(172)
<b>Income from continuing operations, net of tax</b>	<b>415</b>	<b>414</b>
Income from discontinued operations, net of tax	149	186
<b>Net income</b>	<b>564</b>	<b>600</b>
Net income attributable to noncontrolling interests	(29)	(28)
<b>Net income attributable to ABB</b>	<b>535</b>	<b>572</b>
<b>Amounts attributable to ABB shareholders:</b>		
Income from continuing operations, net of tax	397	399
Income from discontinued operations, net of tax	138	173
Net income	535	572
<b>Basic earnings per share attributable to ABB shareholders:</b>		
Income from continuing operations, net of tax	0.19	0.19
Income from discontinued operations, net of tax	0.06	0.08
Net income	0.25	0.27
<b>Diluted earnings per share attributable to ABB shareholders:</b>		
Income from continuing operations, net of tax	0.19	0.19
Income from discontinued operations, net of tax	0.06	0.08
Net income	0.25	0.27
<b>Weighted-average number of shares outstanding (in millions) used to compute:</b>		
Basic earnings per share attributable to ABB shareholders	2,132	2,134
Diluted earnings per share attributable to ABB shareholders	2,134	2,145

Due to rounding, numbers presented may not add to the totals provided.

See Notes to the Interim Consolidated Financial Information

## ABB Ltd Interim Condensed Consolidated Statements of Comprehensive Income (unaudited)

(\$ in millions)	Three months ended	
	Mar. 31, 2019	Mar. 31, 2018
<b>Total comprehensive income, net of tax</b>	<b>562</b>	<b>792</b>
Total comprehensive income attributable to noncontrolling interests, net of tax	(35)	(44)
<b>Total comprehensive income attributable to ABB shareholders, net of tax</b>	<b>527</b>	<b>748</b>

Due to rounding, numbers presented may not add to the totals provided.

See Notes to the Interim Consolidated Financial Information

## ABB Ltd Consolidated Balance Sheets (unaudited)

(\$ in millions, except share data)	Mar. 31, 2019	Dec. 31, 2018
Cash and equivalents	2,734	3,445
Marketable securities and short-term investments	833	712
Receivables, net	6,499	6,386
Contract assets	1,094	1,082
Inventories, net	4,459	4,284
Prepaid expenses	252	176
Other current assets	631	616
Current assets held for sale	5,305	5,164
<b>Total current assets</b>	<b>21,807</b>	<b>21,865</b>
Property, plant and equipment, net	4,082	4,133
Operating lease right-of-use assets	1,103	–
Goodwill	10,765	10,764
Other intangible assets, net	2,527	2,607
Prepaid pension and other employee benefits	82	83
Investments in equity-accounted companies	92	87
Deferred taxes	994	1,006
Other non-current assets	473	469
Non-current assets held for sale	3,677	3,427
<b>Total assets</b>	<b>45,602</b>	<b>44,441</b>
Accounts payable, trade	4,081	4,424
Contract liabilities	1,690	1,707
Short-term debt and current maturities of long-term debt	1,468	2,031
Current operating leases	323	–
Provisions for warranties	937	948
Other provisions	1,370	1,372
Other current liabilities	3,896	3,780
Current liabilities held for sale	4,018	4,185
<b>Total current liabilities</b>	<b>17,783</b>	<b>18,447</b>
Long-term debt	7,050	6,587
Non-current operating leases	795	–
Pension and other employee benefits	1,754	1,828
Deferred taxes	896	927
Other non-current liabilities	1,644	1,689
Non-current liabilities held for sale	578	429
<b>Total liabilities</b>	<b>30,500</b>	<b>29,907</b>
<i>Commitments and contingencies</i>		
<b>Stockholders' equity:</b>		
Common stock, CHF 0.12 par value (2,168,148,264 issued shares at March 31, 2019, and December 31, 2018)	188	188
Additional paid-in capital	70	56
Retained earnings	20,411	19,839
Accumulated other comprehensive loss	(5,355)	(5,311)
Treasury stock, at cost (36,128,111 and 36,185,858 shares at March 31, 2019, and December 31, 2018, respectively)	(819)	(820)
<b>Total ABB stockholders' equity</b>	<b>14,495</b>	<b>13,952</b>
Noncontrolling interests	607	582
<b>Total stockholders' equity</b>	<b>15,102</b>	<b>14,534</b>
<b>Total liabilities and stockholders' equity</b>	<b>45,602</b>	<b>44,441</b>

Due to rounding, numbers presented may not add to the totals provided.

See Notes to the Consolidated Financial Information



## ABB Ltd Consolidated Statements of Cash Flows (unaudited)

(\$ in millions)	Three months ended	
	Mar. 31, 2019	Mar. 31, 2018
<b>Operating activities:</b>		
Net income	564	600
Less: Income from discontinued operations, net of tax	(149)	(186)
<b>Adjustments to reconcile net income to net cash used in operating activities:</b>		
Depreciation and amortization	231	216
Deferred taxes	(29)	(4)
Net loss (gain) from derivatives and foreign exchange	(26)	61
Net loss (gain) from sale of property, plant and equipment	(34)	(26)
Net loss (gain) from sale of businesses	1	6
Share-based payment arrangements	11	10
Other	(26)	–
Changes in operating assets and liabilities:		
Trade receivables, net	(85)	(9)
Contract assets and liabilities	(28)	(144)
Inventories, net	(213)	(246)
Accounts payable, trade	(307)	(94)
Accrued liabilities	154	(224)
Provisions, net	(18)	(93)
Income taxes payable and receivable	11	(32)
Other assets and liabilities, net	(154)	(200)
<b>Net cash used in operating activities – continuing operations</b>	<b>(97)</b>	<b>(365)</b>
<b>Net cash used in operating activities – discontinued operations</b>	<b>(159)</b>	<b>(153)</b>
<b>Net cash used in operating activities</b>	<b>(256)</b>	<b>(518)</b>
<b>Investing activities:</b>		
Purchases of investments	(530)	(17)
Purchases of property, plant and equipment and intangible assets	(207)	(191)
Acquisition of businesses (net of cash acquired) and increases in cost- and equity-accounted companies	(2)	(4)
Proceeds from investments	420	277
Proceeds from maturity of investments	–	124
Proceeds from sales of property, plant and equipment	48	24
Proceeds from sales of businesses (net of transaction costs and cash disposed) and cost- and equity-accounted companies	(21)	(10)
Net cash from settlement of foreign currency derivatives	2	5
Other investing activities	–	(8)
<b>Net cash provided by (used in) investing activities – continuing operations</b>	<b>(290)</b>	<b>200</b>
<b>Net cash used in investing activities – discontinued operations</b>	<b>(44)</b>	<b>(45)</b>
<b>Net cash provided by (used in) investing activities</b>	<b>(334)</b>	<b>155</b>
<b>Financing activities:</b>		
Net changes in debt with original maturities of 90 days or less	456	213
Increase in debt	861	4
Repayment of debt	(1,440)	(40)
Delivery of shares	–	2
Purchase of treasury stock	–	(250)
Dividends paid to noncontrolling shareholders	(2)	(5)
Other financing activities	16	15
<b>Net cash used in financing activities – continuing operations</b>	<b>(109)</b>	<b>(61)</b>
<b>Net cash used in financing activities – discontinued operations</b>	<b>(24)</b>	<b>(3)</b>
<b>Net cash used in financing activities</b>	<b>(133)</b>	<b>(64)</b>
Effects of exchange rate changes on cash and equivalents	12	63
<b>Net change in cash and equivalents</b>	<b>(711)</b>	<b>(364)</b>
Cash and equivalents, beginning of period	3,445	4,526
<b>Cash and equivalents, end of period</b>	<b>2,734</b>	<b>4,162</b>
<b>Supplementary disclosure of cash flow information:</b>		
Interest paid	58	62
Income taxes paid	226	294

Due to rounding, numbers presented may not add to the totals provided.

See Notes to the Consolidated Financial Information

## ABB Ltd Consolidated Statements of Changes in Stockholders' Equity (unaudited)

(\$ in millions)	Common stock	Additional paid-in capital	Retained earnings	Accumulated other comprehensive loss	Treasury stock	Total ABB stockholders' equity	Non-controlling interests	Total stockholders' equity
<b>Balance at January 1, 2018</b>	<b>188</b>	<b>29</b>	<b>19,594</b>	<b>(4,345)</b>	<b>(647)</b>	<b>14,819</b>	<b>530</b>	<b>15,349</b>
Cumulative effect of changes in accounting principles			(192)	(9)		(201)		(201)
Comprehensive income:								
Net income			572			572	28	600
Foreign currency translation adjustments, net of tax of \$(1)				180		180	16	196
Effect of change in fair value of available-for-sale securities, net of tax of \$(1)				(4)		(4)		(4)
Unrecognized income (expense) related to pensions and other postretirement plans, net of tax of \$(3)				10		10		10
Change in derivatives qualifying as cash flow hedges, net of tax of \$(3)				(10)		(10)		(10)
<b>Total comprehensive income</b>						<b>748</b>	<b>44</b>	<b>792</b>
Changes in noncontrolling interests						-	(18)	(18)
Dividends to noncontrolling shareholders						-	(7)	(7)
Dividends payable to shareholders			(1,735)			(1,735)		(1,735)
Share-based payment arrangements		12				12		12
Purchase of treasury stock					(249)	(249)		(249)
Delivery of shares		(1)			3	2		2
<b>Balance at March 31, 2018</b>	<b>188</b>	<b>39</b>	<b>18,239</b>	<b>(4,178)</b>	<b>(893)</b>	<b>13,395</b>	<b>549</b>	<b>13,944</b>
<b>Balance at January 1, 2019</b>	<b>188</b>	<b>56</b>	<b>19,839</b>	<b>(5,311)</b>	<b>(820)</b>	<b>13,952</b>	<b>582</b>	<b>14,534</b>
Adoption of accounting standard update			36	(36)		-		-
Comprehensive income:								
Net income			535			535	29	564
Foreign currency translation adjustments, net of tax of \$0				(51)		(51)	6	(45)
Effect of change in fair value of available-for-sale securities, net of tax of \$1				6		6		6
Unrecognized income (expense) related to pensions and other postretirement plans, net of tax of \$17				33		33		33
Change in derivatives qualifying as cash flow hedges, net of tax of \$0				4		4		4
<b>Total comprehensive income</b>						<b>527</b>	<b>35</b>	<b>562</b>
Changes in noncontrolling interests		1				1	(2)	(1)
Dividends to noncontrolling shareholders						-	(7)	(7)
Share-based payment arrangements		13				13		13
Delivery of shares		(1)			1	-		-
<b>Balance at March 31, 2019</b>	<b>188</b>	<b>70</b>	<b>20,411</b>	<b>(5,355)</b>	<b>(819)</b>	<b>14,495</b>	<b>607</b>	<b>15,102</b>

Due to rounding, numbers presented may not add to the totals provided.

See Notes to the Consolidated Financial Information

# Notes to the Consolidated Financial Information (unaudited)

## Note 1

### The Company and basis of presentation

ABB Ltd and its subsidiaries (collectively, the Company) together form a pioneering technology leader with a comprehensive offering for digital industries. ABB is a leader in digital industries with customer-focused, globally leading businesses.

The Company's Consolidated Financial Information is prepared in accordance with United States of America generally accepted accounting principles (U.S. GAAP) for interim financial reporting. As such, the Consolidated Financial Information does not include all the information and notes required under U.S. GAAP for annual consolidated financial statements. Therefore, such financial information should be read in conjunction with the audited consolidated financial statements in the Company's Annual Report for the year ended December 31, 2018.

The preparation of financial information in conformity with U.S. GAAP requires management to make assumptions and estimates that directly affect the amounts reported in the Consolidated Financial Information. The most significant, difficult and subjective of such accounting assumptions and estimates include:

- estimates and assumptions used in determining the fair values of assets and liabilities assumed in business combinations,
- assumptions used in the determination of corporate costs directly attributable to discontinued operations,
- assumptions used in determining inventory obsolescence and net realizable value,
- estimates used to record expected costs for employee severance in connection with restructuring programs,
- assumptions and projections, principally related to future material, labor and project related overhead costs, used in determining the percentage of completion on projects, as well as the amount of variable consideration the Company expects to be entitled to,
- estimates of loss contingencies associated with litigation or threatened litigation and other claims and inquiries, environmental damages, product warranties, self-insurance reserves, regulatory and other proceedings,
- assumptions used in the calculation of pension and postretirement benefits and the fair value of pension plan assets,
- estimates to determine valuation allowances for deferred tax assets and amounts recorded for uncertain tax positions,
- growth rates, discount rates and other assumptions used to determine impairment of long lived assets and in testing goodwill for impairment, and
- assessment of the allowance for doubtful accounts.

The actual results and outcomes may differ from the Company's estimates and assumptions.

A portion of the Company's activities (primarily long-term construction activities) has an operating cycle that exceeds one year. For classification of current assets and liabilities related to such activities, the Company elected to use the duration of the individual contracts as its operating cycle. Accordingly, there are accounts receivable, contract assets, inventories and provisions related to these contracts which will not be realized within one year that have been classified as current.

#### Basis of presentation

In the opinion of management, the unaudited Consolidated Financial Information contains all necessary adjustments to present fairly the financial position, results of operations and cash flows for the reported periods. Management considers all such adjustments to be of a normal recurring nature.

The Company has retained obligations (primarily for environmental and taxes) related to businesses disposed or otherwise exited that qualified as discontinued operations. Changes to these retained obligations are recorded in income/loss from discontinued operations, net of tax.

The Consolidated Financial Information is presented in United States dollars (\$) unless otherwise stated. Due to rounding, numbers presented in the Consolidated Financial Information may not add to the totals provided.

#### Discontinued operations and reclassifications

In December 2018, the Company announced an agreement to divest its Power Grids business to Hitachi Corp. (Japan) (See Note 3 for additional information and relevant disclosures). As a result, this business along with certain real estate assets previously included in Corporate and Other, have been reported as discontinued operations. Financial information and disclosures for prior periods have been retroactively recast to give effect to the discontinued operations presentation.

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## Note 2

### Recent accounting pronouncements

#### Applicable for current periods

##### Leases

In January 2019, the Company adopted a new accounting standard that requires lessees to recognize lease assets and corresponding lease liabilities on the balance sheet for all leases with terms of more than twelve months with several practical expedients. The new accounting standard continues to classify leases as either finance or operating, with the classification determining the pattern of expense recognition in the income statement. It also requires additional disclosures about the Company's leasing activities. The Company has elected to not recognize lease assets and lease liabilities for leases with terms of less than twelve months and to not separate lease and non-lease components for leases other than real estate.

The Company has adopted the standard on a modified retrospective basis and has therefore recorded a cumulative-effect adjustment to the opening balance of retained earnings on January 1, 2019. It has elected to apply the package of practical expedients which permits the Company to not reassess under the new standard prior conclusions about lease identification, lease classification and initial direct costs. While the adoption of this standard only had an insignificant impact on the Company's results of operations and cash flows, total assets and total liabilities increased by \$1,344 million and \$1,360 million, respectively, of which \$148 million and \$153 million, respectively, relate to assets and liabilities held for sale. Comparable information has not been restated to reflect the adoption of this new standard and continues to be measured and reported under the accounting standard in effect for those period presented.

##### Derivatives and Hedging—Targeted improvements to accounting for hedging activities

In January 2019, the Company adopted an accounting standard update which expands and refines hedge accounting for both financial and non-financial risk components, aligns the recognition and presentation of the effects of hedging instruments and hedge items in the financial statements, and includes certain targeted improvements to ease the application of current guidance related to the assessment of hedge effectiveness. This update was applied on a modified retrospective basis for cash flow and net investment hedges and prospectively for the amended presentation and disclosure guidance but did not have a significant impact on the consolidated financial statements.

##### Reclassification of certain tax effects from accumulated other comprehensive income

In January 2019, the Company adopted an accounting standard update which allows a reclassification of the stranded tax effects in accumulated other comprehensive income resulting from the Tax Cuts and Jobs Act of 2017 to retained earnings. The updated guidance was applied in the period of adoption and resulted in a reclassification of \$36 million from accumulated other comprehensive income to retained earnings.

#### Applicable for future periods

##### Measurement of credit losses on financial instruments

In June 2016, an accounting standard update was issued which replaces the existing incurred loss impairment methodology for most financial assets with a new "current expected credit loss" model. The new model will result in the immediate recognition of the estimated credit losses expected to occur over the remaining life of financial assets such as trade and other receivables, held-to-maturity debt securities, loans and other instruments. Credit losses relating to available-for-sale debt securities will be measured in a manner similar to current GAAP, except that the losses will be recorded through an allowance for credit losses rather than as a direct write-down of the security.

This update is effective for the Company for annual and interim periods beginning January 1, 2020, with early adoption permitted for annual and interim periods beginning January 1, 2019. The Company is currently evaluating the impact of this update on its consolidated financial statements.

##### Customer's accounting for implementation costs incurred in a cloud computing arrangement that is a service contract

In August 2018, an accounting standard update was issued which aligns the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. This update is effective for the Company for annual and interim periods beginning January 1, 2020, with early adoption in any interim period permitted. The Company is currently evaluating the impact of this update on its consolidated financial statements.

##### Disclosure Framework — Changes to the disclosure requirements for fair value measurement

In August 2018, an accounting standard update was issued which modifies the disclosure requirements for fair value measurements. The update eliminates the requirements to disclose the amount of and reasons for transfers between Level 1 and 2 of the fair value hierarchy, the timing of transfers between levels and the Level 3 valuation process, while expanding the Level 3 disclosures to include the range and weighted-average used to develop significant unobservable inputs and the changes in unrealized gains and losses on recurring fair value measurements. This update is effective for the Company for annual and interim periods beginning January 1, 2020, with early adoption permitted. The changes and modifications to the Level 3 disclosures are to be applied prospectively, while all other amendments are to be applied retrospectively. The Company is currently evaluating the impact of this update on its disclosures but does not expect that it will have a material effect on its consolidated financial statements.

## Note 3

### Discontinued operations

#### Held for sale and discontinued operations

The Company reports a disposal, or planned disposal, of a component or a group of components as a discontinued operation if the disposal represents a strategic shift that has or will have a major effect on the Company's operations and financial results. A strategic shift could include a disposal of a major geographical area, a major line of business or other major parts of the Company. A component may be a reportable segment or an operating segment, a reporting unit, a subsidiary, or an asset group.

Assets and liabilities of a component reported as a discontinued operation are presented as held for sale in the Company's Consolidated Balance Sheets.

Interest that is not directly attributable to or related to the Company's continuing business or discontinued business is allocated to discontinued operations based on the ratio of net assets to be sold less debt that is required to be paid as a result of the planned disposal transaction to the sum of total net assets of the Company plus consolidated debt. General corporate overhead is not allocated to discontinued operations.

On December 17, 2018, the Company announced an agreement to divest 80.1 percent of its Power Grids business to Hitachi Ltd. (Hitachi) valuing the business at \$11 billion. The business also includes certain real estate properties which were previously reported within Corporate and Other as the Company primarily manages real estate assets centrally as corporate assets. As a result, this business, along with the related real estate assets previously included in Corporate and Other, have been reported as discontinued operations. The divestment is expected to be completed in the first half of 2020, following the receipt of customary regulatory approvals as well as the completion of certain legal entity reorganizations expected to be completed before the sale. Assets and liabilities in the discontinued operation have maintained their existing classification as current or non-current as the sale is not expected to be completed for more than 12 months.

As this planned divestment represents a strategic shift that will have a major effect on the Company's operations and financial results, the results of operations for this business have been presented as discontinued operations and the assets and liabilities are reflected as held-for-sale for all periods presented. Financial information and disclosures previously reported as of and for the three months ended March 31, 2018, have been retroactively recast to give effect to the discontinued operations presentation. In addition, amounts relating to stranded corporate costs have been excluded from discontinued operations and are now included as a component of Corporate and Other. Stranded costs represent overhead and other management costs which were previously able to be included in the measure of segment profit (Operational EBITA) for the former Power Grids operating segment but are not directly attributable to the discontinued operation and thus do not qualify to be recorded as part of income from discontinued operations.

Operating results of the discontinued operations are summarized as follows:

(\$ in millions)	Three months ended	
	Mar. 31, 2019	Mar. 31, 2018
Total revenues	2,129	2,385
Total cost of sales	(1,590)	(1,772)
<b>Gross profit</b>	<b>539</b>	<b>613</b>
Expenses	(330)	(350)
<b>Income from operations</b>	<b>209</b>	<b>263</b>
Net interest and other finance expense	(14)	(18)
Non-operational pension (cost) credit	3	3
<b>Income from discontinued operations before taxes</b>	<b>198</b>	<b>248</b>
Provision for taxes	(49)	(62)
<b>Income from discontinued operations, net of tax</b>	<b>149</b>	<b>186</b>

Of the total Income from discontinued operations before taxes in the table above, \$186 million and \$232 million in the three months ended March 31, 2019 and 2018, respectively, are attributable to the Company, while the remainder is attributable to noncontrolling interests.

Income from discontinued operations before taxes excludes stranded costs which were previously able to be allocated to the Power Grids operating segment. As a result, for the three months ended March 31, 2019 and 2018, \$67 million and \$76 million, respectively, of allocated overhead and other management costs, which were previously able to be included in the measure of segment profit for the Power Grids operating segment are now reported as part of Corporate and Other. In the table above, Net interest and other finance expense in the three months ended March 31, 2019 and 2018, includes \$13 million and \$9 million, respectively, of interest expense which has been recorded on an allocated basis in accordance with the Company's accounting policy election. In addition, as required by U.S. GAAP, subsequent to December 17, 2018, the Company has not recorded depreciation or amortization on the property, plant and equipment and intangible assets reported as discontinued operations and as a result, a total of \$51 million of depreciation and amortization expense was not recorded in the three months ended March 31, 2019.

Included in the reported Total revenues of the Company for the three months ended March 31, 2019 and 2018, are revenues from the Company's operating segments to the Power Grids business of \$53 million and \$59 million, respectively, which represent intercompany transactions that, prior to Power Grids being classified as a discontinued operation, were eliminated in the Company's Consolidated Financial Information (see Note 16).



The major components of assets and liabilities held for sale in the Company's Consolidated Balance Sheets are summarized as follows:

(\$ in millions)	Mar. 31, 2019	Dec. 31, 2018
Receivables, net	2,389	2,377
Contract assets	1,268	1,236
Inventories, net	1,541	1,457
Other current assets	107	94
<b>Current assets held for sale</b>	<b>5,305</b>	<b>5,164</b>
Property, plant and equipment, net	1,551	1,477
Goodwill	1,621	1,620
Other non-current assets	505	330
<b>Non-current assets held for sale</b>	<b>3,677</b>	<b>3,427</b>
Accounts payable, trade	1,601	1,732
Contract liabilities	1,015	998
Other current liabilities	1,402	1,455
<b>Current liabilities held for sale</b>	<b>4,018</b>	<b>4,185</b>
Pension and other employee benefits	264	268
Other non-current liabilities	314	161
<b>Non-current liabilities held for sale</b>	<b>578</b>	<b>429</b>

## Note 4

### Acquisitions and divestments

#### Acquisitions

On June 30, 2018, the Company acquired through numerous share and asset purchases substantially all the assets, liabilities and business activities of GE Industrial Solutions (GEIS), GE's global electrification solutions business. GEIS, headquartered in Atlanta, United States, provides technologies that distribute and control electricity and support the commercial, data center, health care, mining, renewable energy, oil and gas, water and telecommunications sectors. The resulting cash outflows for the Company amounted to \$2,622 million (net of cash acquired of \$192 million). The acquisition strengthens the Company's global position in electrification and expands its access to the North American market through strong customer relationships, a large installed base and extensive distribution networks. Consequently, the goodwill acquired represents expected operating synergies and cost savings as well as intangible assets that are not separable such as employee know-how and expertise.

While the Company uses its best estimates and assumptions as part of the purchase price allocation process to value assets acquired and liabilities assumed at the acquisition date, the purchase price allocation for acquisitions is preliminary for up to 12 months after the acquisition date and is subject to refinement as more detailed analyses are completed and additional information about the fair values of the acquired assets and liabilities becomes available. Given the timing and complexity of the acquisition of GEIS, the purchase price allocation in the Company's Consolidated Financial Information has not yet been finalized, primarily relating to amounts allocated to net working capital, pension obligations, current and deferred income taxes as well as intangible assets. Changes in allocated amounts could also affect the amount attributable to the noncontrolling interest. At March 31, 2019, the Company is still gathering, analyzing and evaluating relevant information, including certain inputs required for the valuation of intangibles. As a result, amounts recorded in the preliminary purchase price allocation may still change in the second quarter of 2019. The final purchase price adjustments as well as the final fair value determinations could result in material adjustments to the values presented in the preliminary purchase price allocation table below.

The aggregate preliminary allocation (including measurement period adjustments) of the purchase consideration for GEIS, is as follows:

(\$ in millions)	Preliminary allocated amounts	Weighted-average useful life
Technology	87	7 years
Customer relationships	214	14 years
Trade names	122	13 years
Supply agreement	34	13 years
Intangible assets	457	
Property, plant and equipment	379	
Deferred tax liabilities	(110)	
Inventories	426	
Other assets and liabilities, net <sup>(1)</sup>	101	
Goodwill <sup>(2)</sup>	1,476	
Noncontrolling interest	(107)	
<b>Total consideration (net of cash acquired)<sup>(3)</sup></b>	<b>2,622</b>	

(1) Gross receivables totaled \$658 million; the fair value of which was \$624 million after adjusting for contractual cash flows not expected to be collected.

(2) The Company expects that goodwill recorded in certain jurisdictions will be tax deductible. The amount is subject to the finalization of the purchase price allocation in 2019.

(3) Cash acquired totaled \$192 million.

The unaudited pro forma financial information in the table below summarizes the combined pro forma results of the Company and GEIS for the three months ended March 31, 2018, as if GEIS had been acquired on January 1, 2017.

(\$ in millions)	Three months ended March 31, 2018
Total revenues	7,054
Income from continuing operations, net of tax	422

The pro forma results are for information purposes only and do not include any anticipated cost synergies or other effects of the planned integration of GEIS. Accordingly, such pro forma amounts are not necessarily indicative of the results that would have occurred had the acquisition been completed on the date indicated, nor are they indicative of the future operating results of the combined company.

The unaudited pro forma results above include certain adjustments related to the GEIS acquisition. The table below summarizes the adjustments necessary to present the pro forma financial information of the combined entity as if GEIS had been acquired on January 1, 2017.

(\$ in millions)	Three months ended March 31, 2018
Impact on cost of sales from additional amortization of intangible assets	(5)
Impact on cost of sales from additional depreciation of property, plant and equipment	(2)
Impact on selling, general and administrative expenses from additional amortization of intangible assets	(2)
Impact on selling, general and administrative expenses from acquisition-related costs	10
Impact on interest from financing costs	(14)
Taxation adjustments	4
<b>Total pro forma adjustments</b>	<b>(9)</b>

#### Goodwill

Changes in total goodwill were as follows:

(\$ in millions)	Total Goodwill
<b>Balance at January 1, 2018</b>	<b>9,536</b>
Goodwill acquired during the year <sup>(1)</sup>	1,472
Goodwill allocated to disposals	(31)
Exchange rate differences and other	(213)
<b>Balance at December 31, 2018</b>	<b>10,764</b>
Measurement period adjustments to goodwill acquired in previous periods	34
Exchange rate differences and other	(33)
<b>Balance at March 31, 2019</b>	<b>10,765</b>

(1) Includes primarily goodwill in respect of GEIS, acquired in June 2018, which has been allocated to the Electrification Products operating segment.

## Note 5

### Cash and equivalents, marketable securities and short-term investments

Cash and equivalents, marketable securities and short-term investments consisted of the following:

March 31, 2019						
(\$ in millions)	Cost basis	Gross unrealized gains	Gross unrealized losses	Fair value	Cash and equivalents	Marketable securities and short-term investments
<b>Changes in fair value recorded in net income</b>						
Cash	1,780	–	–	1,780	1,780	–
Time deposits	955	–	–	955	954	1
Equity securities	495	9	–	504	–	504
	3,230	9	–	3,239	2,734	505
<b>Changes in fair value recorded in other comprehensive income</b>						
Debt securities available-for-sale:						
U.S. government obligations	249	2	(2)	249	–	249
Corporate	77	2	–	79	–	79
	326	4	(2)	328	–	328
<b>Total</b>	<b>3,556</b>	<b>13</b>	<b>(2)</b>	<b>3,567</b>	<b>2,734</b>	<b>833</b>

December 31, 2018						
(\$ in millions)	Cost basis	Gross unrealized gains	Gross unrealized losses	Fair value	Cash and equivalents	Marketable securities and short-term investments
<b>Changes in fair value recorded in net income</b>						
Cash	1,983	–	–	1,983	1,983	–
Time deposits	1,463	–	–	1,463	1,462	1
Other short-term investments	206	–	–	206	–	206
Equity securities	206	–	(3)	203	–	203
	3,858	–	(3)	3,855	3,445	410
<b>Changes in fair value recorded in other comprehensive income</b>						
Debt securities available-for-sale:						
U.S. government obligations	217	–	(3)	214	–	214
Corporate	90	–	(2)	88	–	88
	307	–	(5)	302	–	302
<b>Total</b>	<b>4,165</b>	<b>–</b>	<b>(8)</b>	<b>4,157</b>	<b>3,445</b>	<b>712</b>

Other short-term investments at December 31, 2018 were receivables of \$206 million, representing reverse repurchase agreements.

## Note 6

### Derivatives financial instruments

The Company is exposed to certain currency, commodity, interest rate and equity risks arising from its global operating, financing and investing activities. The Company uses derivative instruments to reduce and manage the economic impact of these exposures.

#### Currency risk

Due to the global nature of the Company's operations, many of its subsidiaries are exposed to currency risk in their operating activities from entering into transactions in currencies other than their functional currency. To manage such currency risks, the Company's policies require its subsidiaries to hedge their foreign currency exposures from binding sales and purchase contracts denominated in foreign currencies. For forecasted foreign currency denominated sales of standard products and the related foreign currency denominated purchases, the Company's policy is to hedge up to a maximum of 100 percent of the forecasted foreign currency denominated exposures, depending on the length of the forecasted exposures. Forecasted exposures greater than 12 months are not hedged. Forward foreign exchange contracts are the main instrument used to protect the Company against the volatility of future cash flows (caused by changes in exchange rates) of contracted and forecasted sales and purchases denominated in foreign currencies. In addition, within its treasury operations, the Company primarily uses

foreign exchange swaps and forward foreign exchange contracts to manage the currency and timing mismatches arising in its liquidity management activities.

#### Commodity risk

Various commodity products are used in the Company's manufacturing activities. Consequently it is exposed to volatility in future cash flows arising from changes in commodity prices. To manage the price risk of commodities, the Company's policies require that its subsidiaries hedge the commodity price risk exposures from binding contracts, as well as at least 50 percent (up to a maximum of 100 percent) of the forecasted commodity exposure over the next 12 months or longer (up to a maximum of 18 months). Primarily swap contracts are used to manage the associated price risks of commodities.

#### Interest rate risk

The Company has issued bonds at fixed rates. Interest rate swaps are used to manage the interest rate risk associated with certain debt and generally such swaps are designated as fair value hedges. In addition, from time to time, the Company uses instruments such as interest rate swaps, interest rate futures, bond futures or forward rate agreements to manage interest rate risk arising from the Company's balance sheet structure but does not designate such instruments as hedges.

#### Equity risk

The Company is exposed to fluctuations in the fair value of its warrant appreciation rights (WARs) issued under its management incentive plan. A WAR gives its holder the right to receive cash equal to the market price of an equivalent listed warrant on the date of exercise. To eliminate such risk, the Company has purchased cash-settled call options, indexed to the shares of the Company, which entitle the Company to receive amounts equivalent to its obligations under the outstanding WARs.

#### Volume of derivative activity

In general, while the Company's primary objective in its use of derivatives is to minimize exposures arising from its business, certain derivatives are designated and qualify for hedge accounting treatment while others either are not designated or do not qualify for hedge accounting.

#### Foreign exchange and interest rate derivatives

The gross notional amounts of outstanding foreign exchange and interest rate derivatives (whether designated as hedges or not) were as follows:

Type of derivative (\$ in millions)	Total notional amounts at		
	March 31, 2019	December 31, 2018	March 31, 2018
Foreign exchange contracts	12,837	13,612	15,303
Embedded foreign exchange derivatives	766	733	951
Interest rate contracts	3,703	3,300	5,276

#### Derivative commodity contracts

The Company uses derivatives to hedge its direct or indirect exposure to the movement in the prices of commodities which are primarily copper, silver and aluminum. The following table shows the notional amounts of outstanding derivatives (whether designated as hedges or not), on a net basis, to reflect the Company's requirements for these commodities:

Type of derivative	Unit	Total notional amounts at		
		March 31, 2019	December 31, 2018	March 31, 2018
Copper swaps	metric tonnes	45,365	46,143	32,238
Silver swaps	ounces	2,513,033	2,861,294	2,293,832
Aluminum swaps	metric tonnes	9,347	9,491	1,961

#### Equity derivatives

At March 31, 2019, December 31, 2018, and March 31, 2018, the Company held 40 million, 41 million and 35 million cash-settled call options indexed to ABB Ltd shares (conversion ratio 5:1) with a total fair value of \$4 million, \$6 million and \$20 million, respectively.

#### Cash flow hedges

As noted above, the Company mainly uses forward foreign exchange contracts to manage the foreign exchange risk of its operations, commodity swaps to manage its commodity risks and cash-settled call options to hedge its WAR liabilities. Where such instruments are designated and qualify as cash flow hedges, the effective portion of the changes in their fair value is recorded in "Accumulated other comprehensive loss" and subsequently reclassified into earnings in the same line item and in the same period as the underlying hedged transaction affects earnings.

At March 31, 2019, and December 31, 2018, "Accumulated other comprehensive loss" included net unrealized losses of \$13 million and \$16 million, respectively, net of tax, on derivatives designated as cash flow hedges. Of the amount at March 31, 2019, net losses of \$2 million are expected to be reclassified to earnings in the following 12 months. At March 31, 2019, the longest maturity of a derivative classified as a cash flow hedge was 58 months.

The amount of gains or losses, net of tax, reclassified into earnings due to the discontinuance of cash flow hedge accounting and the amount of ineffectiveness in cash flow hedge relationships directly recognized in earnings were not significant in the three months ended March 31, 2019 and 2018.

The pre-tax effects of derivative instruments, designated and qualifying as cash flow hedges, on "Accumulated other comprehensive loss" (OCI) and the Consolidated Income Statements were not significant.

#### Fair value hedges

To reduce its interest rate exposure arising primarily from its debt issuance activities, the Company uses interest rate swaps. Where such instruments are designated as fair value hedges, the changes in the fair value of these instruments, as well as the changes in the fair value of the risk component of the underlying debt being hedged, are recorded as offsetting gains and losses in "Interest and other finance expense". Hedge ineffectiveness of instruments designated as fair value hedges for the three months ended March 31, 2019 and 2018, was not significant.

The effect of interest rate contracts, designated and qualifying as fair value hedges, on the Consolidated Income Statements was as follows:

(\$ in millions)	Three months ended March 31,	
	2019	2018
Gains (losses) recognized in Interest and other finance expense:		
- on derivatives designated as fair value hedges	26	(25)
- on hedged item	(26)	26

#### Derivatives not designated in hedge relationships

Derivative instruments that are not designated as hedges or do not qualify as either cash flow or fair value hedges are economic hedges used for risk management purposes. Gains and losses from changes in the fair values of such derivatives are recognized in the same line in the income statement as the economically hedged transaction.

Furthermore, under certain circumstances, the Company is required to split and account separately for foreign currency derivatives that are embedded within certain binding sales or purchase contracts denominated in a currency other than the functional currency of the subsidiary and the counterparty.

The gains (losses) recognized in the Consolidated Income Statements on derivatives not designated in hedging relationships were as follows:

Type of derivative not designated as a hedge (\$ in millions)	Location	Gains (losses) recognized in income	
		Three months ended March 31,	
		2019	2018
Foreign exchange contracts	Total revenues	3	10
	Total cost of sales	(37)	9
	SG&A expenses <sup>(1)</sup>	(3)	(8)
	Non-order related research and development	-	(1)
	Interest and other finance expense	(20)	25
Embedded foreign exchange contracts	Total revenues	(2)	4
	Total cost of sales	-	1
	SG&A expenses <sup>(1)</sup>	-	1
Commodity contracts	Total cost of sales	18	(16)
	Interest and other finance expense	-	1
Other	Interest and other finance expense	-	2
<b>Total</b>		<b>(41)</b>	<b>28</b>

(1) SG&A expenses represent "Selling, general and administrative expenses".

The fair values of derivatives included in the Consolidated Balance Sheets were as follows:

(\$ in millions)	March 31, 2019			
	Derivative assets		Derivative liabilities	
	Current in	Non-current in	Current in	Non-current in
	"Other current assets"	"Other non-current assets"	"Other current liabilities"	"Other non-current liabilities"
<b>Derivatives designated as hedging instruments:</b>				
Foreign exchange contracts	-	-	2	4
Commodity contracts	1	-	-	-
Interest rate contracts	-	59	-	-
Cash-settled call options	2	2	-	-
<b>Total</b>	<b>3</b>	<b>61</b>	<b>2</b>	<b>4</b>
<b>Derivatives not designated as hedging instruments:</b>				
Foreign exchange contracts	92	13	149	24
Commodity contracts	16	1	5	-
Embedded foreign exchange derivatives	21	2	11	2
<b>Total</b>	<b>129</b>	<b>16</b>	<b>165</b>	<b>26</b>
<b>Total fair value</b>	<b>132</b>	<b>77</b>	<b>167</b>	<b>30</b>



(\$ in millions)	December 31, 2018			
	Derivative assets		Derivative liabilities	
	Current in "Other current assets"	Non-current in "Other non-current assets"	Current in "Other current liabilities"	Non-current in "Other non-current liabilities"
<b>Derivatives designated as hedging instruments:</b>				
Foreign exchange contracts	–	–	1	4
Commodity contracts	–	–	2	–
Interest rate contracts	–	35	–	1
Cash-settled call options	3	3	–	–
<b>Total</b>	<b>3</b>	<b>38</b>	<b>3</b>	<b>5</b>
<b>Derivatives not designated as hedging instruments:</b>				
Foreign exchange contracts	117	14	160	30
Commodity contracts	8	1	21	1
Embedded foreign exchange derivatives	15	10	8	1
<b>Total</b>	<b>140</b>	<b>25</b>	<b>189</b>	<b>32</b>
<b>Total fair value</b>	<b>143</b>	<b>63</b>	<b>192</b>	<b>37</b>

Close-out netting agreements provide for the termination, valuation and net settlement of some or all outstanding transactions between two counterparties on the occurrence of one or more pre-defined trigger events.

Although the Company is party to close-out netting agreements with most derivative counterparties, the fair values in the tables above and in the Consolidated Balance Sheets at March 31, 2019, and December 31, 2018, have been presented on a gross basis.

The Company's netting agreements and other similar arrangements allow net settlements under certain conditions. At March 31, 2019, and December 31, 2018, information related to these offsetting arrangements was as follows:

March 31, 2019					
Type of agreement or similar arrangement	Gross amount of recognized assets	Derivative liabilities eligible for set-off in case of default	Cash collateral received	Non-cash collateral received	Net asset exposure
Derivatives	186	(102)	–	–	84
<b>Total</b>	<b>186</b>	<b>(102)</b>	<b>–</b>	<b>–</b>	<b>84</b>

March 31, 2019					
Type of agreement or similar arrangement	Gross amount of recognized liabilities	Derivative liabilities eligible for set-off in case of default	Cash collateral pledged	Non-cash collateral pledged	Net liability exposure
Derivatives	184	(102)	–	–	82
<b>Total</b>	<b>184</b>	<b>(102)</b>	<b>–</b>	<b>–</b>	<b>82</b>

December 31, 2018					
Type of agreement or similar arrangement	Gross amount of recognized assets	Derivative liabilities eligible for set-off in case of default	Cash collateral received	Non-cash collateral received	Net asset exposure
Derivatives	181	(121)	–	–	60
Reverse repurchase agreements	206	–	–	(206)	–
<b>Total</b>	<b>387</b>	<b>(121)</b>	<b>–</b>	<b>(206)</b>	<b>60</b>

December 31, 2018					
Type of agreement or similar arrangement	Gross amount of recognized liabilities	Derivative liabilities eligible for set-off in case of default	Cash collateral pledged	Non-cash collateral pledged	Net liability exposure
Derivatives	220	(121)	–	–	99
<b>Total</b>	<b>220</b>	<b>(121)</b>	<b>–</b>	<b>–</b>	<b>99</b>

## Note 7

### Fair values

The Company uses fair value measurement principles to record certain financial assets and liabilities on a recurring basis and, when necessary, to record certain non-financial assets at fair value on a non-recurring basis, as well as to determine fair value disclosures for certain financial instruments carried at amortized cost in the financial statements. Financial assets and liabilities recorded at fair value on a recurring basis include foreign currency, commodity and interest rate derivatives, as well as cash-settled call options and available-for-sale securities. Non-financial assets recorded at fair value on a non-recurring basis include long-lived assets that are reduced to their estimated fair value due to impairments.

Fair value is the price that would be received when selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. In determining fair value, the Company uses various valuation techniques including the market approach (using observable market data for identical or similar assets and liabilities), the income approach (discounted cash flow models) and the cost approach (using costs a market participant would incur to develop a comparable asset). Inputs used to determine the fair value of assets and liabilities are defined by a three-level hierarchy, depending on the nature of those inputs. The Company has categorized its financial assets and liabilities and non-financial assets measured at fair value within this hierarchy based on whether the inputs to the valuation technique are observable or unobservable. An observable input is based on market data obtained from independent sources, while an unobservable input reflects the Company's assumptions about market data.

The levels of the fair value hierarchy are as follows:

- Level 1:** Valuation inputs consist of quoted prices in an active market for identical assets or liabilities (observable quoted prices). Assets and liabilities valued using Level 1 inputs include certain actively traded debt securities.
- Level 2:** Valuation inputs consist of observable inputs (other than Level 1 inputs) such as actively quoted prices for similar assets, quoted prices in inactive markets and inputs other than quoted prices such as interest rate yield curves, credit spreads, or inputs derived from other observable data by interpolation, correlation, regression or other means. The adjustments applied to quoted prices or the inputs used in valuation models may be both observable and unobservable. In these cases, the fair value measurement is classified as Level 2 unless the unobservable portion of the adjustment or the unobservable input to the valuation model is significant, in which case the fair value measurement would be classified as Level 3. Assets and liabilities valued or disclosed using Level 2 inputs include investments in certain funds, reverse repurchase agreements, certain debt securities that are not actively traded, interest rate swaps, commodity swaps, cash-settled call options, forward foreign exchange contracts, foreign exchange swaps and forward rate agreements, time deposits, as well as financing receivables and debt.
- Level 3:** Valuation inputs are based on the Company's assumptions of relevant market data (unobservable input).

Whenever quoted prices involve bid-ask spreads, the Company ordinarily determines fair values based on mid-market quotes. However, for the purpose of determining the fair value of cash-settled call options serving as hedges of the Company's management incentive plan, bid prices are used.

When determining fair values based on quoted prices in an active market, the Company considers if the level of transaction activity for the financial instrument has significantly decreased, or would not be considered orderly. In such cases, the resulting changes in valuation techniques would be disclosed. If the market is considered disorderly or if quoted prices are not available, the Company is required to use another valuation technique, such as an income approach.

#### Recurring fair value measures

The fair values of financial assets and liabilities measured at fair value on a recurring basis were as follows:

(\$ in millions)	March 31, 2019			
	Level 1	Level 2	Level 3	Total fair value
<b>Assets</b>				
Securities in “Marketable securities and short-term investments”:				
Equity securities	–	504	–	504
Debt securities—U.S. government obligations	249	–	–	249
Debt securities—Corporate	–	79	–	79
Derivative assets—current in “Other current assets”	–	132	–	132
Derivative assets—non-current in “Other non-current assets”	–	77	–	77
<b>Total</b>	<b>249</b>	<b>792</b>	<b>–</b>	<b>1,041</b>
<b>Liabilities</b>				
Derivative liabilities—current in “Other current liabilities”	–	167	–	167
Derivative liabilities—non-current in “Other non-current liabilities”	–	30	–	30
<b>Total</b>	<b>–</b>	<b>197</b>	<b>–</b>	<b>197</b>

(\$ in millions)	December 31, 2018			
	Level 1	Level 2	Level 3	Total fair value
<b>Assets</b>				
Securities in "Marketable securities and short-term investments":				
Equity securities	–	203	–	203
Debt securities—U.S. government obligations	214	–	–	214
Debt securities—Corporate	–	88	–	88
Derivative assets—current in "Other current assets"	–	143	–	143
Derivative assets—non-current in "Other non-current assets"	–	63	–	63
<b>Total</b>	<b>214</b>	<b>497</b>	<b>–</b>	<b>711</b>
<b>Liabilities</b>				
Derivative liabilities—current in "Other current liabilities"	–	192	–	192
Derivative liabilities—non-current in "Other non-current liabilities"	–	37	–	37
<b>Total</b>	<b>–</b>	<b>229</b>	<b>–</b>	<b>229</b>

The Company uses the following methods and assumptions in estimating fair values of financial assets and liabilities measured at fair value on a recurring basis:

- **Securities in "Marketable securities and short-term investments":** If quoted market prices in active markets for identical assets are available, these are considered Level 1 inputs; however, when markets are not active, these inputs are considered Level 2. If such quoted market prices are not available, fair value is determined using market prices for similar assets or present value techniques, applying an appropriate risk-free interest rate adjusted for nonperformance risk. The inputs used in present value techniques are observable and fall into the Level 2 category.
- **Derivatives:** The fair values of derivative instruments are determined using quoted prices of identical instruments from an active market, if available (Level 1). If quoted prices are not available, price quotes for similar instruments, appropriately adjusted, or present value techniques, based on available market data, or option pricing models are used. Cash-settled call options hedging the Company's WAR liability are valued based on bid prices of the equivalent listed warrant. The fair values obtained using price quotes for similar instruments or valuation techniques represent a Level 2 input unless significant unobservable inputs are used.

#### Non-recurring fair value measures

There were no significant non-recurring fair value measurements during the three months ended March 31, 2019 and 2018.

#### Disclosure about financial instruments carried on a cost basis

The fair values of financial instruments carried on a cost basis were as follows:

		March 31, 2019			
(\$ in millions)	Carrying value	Level 1	Level 2	Level 3	Total fair value
<b>Assets</b>					
Cash and equivalents (excluding securities with original maturities up to 3 months):					
Cash	1,780	1,780	–	–	1,780
Time deposits	954	–	954	–	954
Marketable securities and short-term investments (excluding securities):					
Time deposits	1	–	1	–	1
Other non-current assets:					
Loans granted	31	–	33	–	33
Restricted time deposits	36	36	–	–	36
<b>Liabilities</b>					
Short-term debt and current maturities of long-term debt (excluding capital lease obligations)					
	1,437	97	1,340	–	1,437
Long-term debt (excluding capital lease obligations)	6,899	6,400	711	–	7,111

(\$ in millions)	December 31, 2018				
	Carrying value	Level 1	Level 2	Level 3	Total fair value
<b>Assets</b>					
Cash and equivalents (excluding securities with original maturities up to 3 months):					
Cash	1,983	1,983	–	–	<b>1,983</b>
Time deposits	1,462	–	1,462	–	<b>1,462</b>
Marketable securities and short-term investments (excluding securities):					
Time deposits	1	–	1	–	<b>1</b>
Receivables under reverse repurchase agreements	206	–	206	–	<b>206</b>
Other non-current assets:					
Loans granted	30	–	31	–	<b>31</b>
Restricted time deposits	39	39	–	–	<b>39</b>
<b>Liabilities</b>					
Short-term debt and current maturities of long-term debt (excluding capital lease obligations)	2,008	1,480	528	–	<b>2,008</b>
Long-term debt (excluding capital lease obligations)	6,457	5,839	707	–	<b>6,546</b>

The Company uses the following methods and assumptions in estimating fair values of financial instruments carried on a cost basis:

- Cash and equivalents (excluding securities with original maturities up to 3 months), and Marketable securities and short-term investments (excluding securities): The carrying amounts approximate the fair values as the items are short-term in nature.
- Other non-current assets: Includes (i) loans granted whose fair values are based on the carrying amount adjusted using a present value technique to reflect a premium or discount based on current market interest rates (Level 2 inputs), and (ii) restricted time deposits whose fair values approximate the carrying amounts (Level 1 inputs).
- Short-term debt and current maturities of long-term debt (excluding capital lease obligations): Short-term debt includes commercial paper, bank borrowings and overdrafts. The carrying amounts of short-term debt and current maturities of long-term debt, excluding capital lease obligations, approximate their fair values.
- Long-term debt (excluding capital lease obligations): Fair values of bonds are determined using quoted market prices (Level 1 inputs), if available. For bonds without available quoted market prices and other long-term debt, the fair values are determined using a discounted cash flow methodology based upon borrowing rates of similar debt instruments and reflecting appropriate adjustments for non-performance risk (Level 2 inputs).

## Note 8

### Commitments and contingencies

#### Contingencies—Regulatory, Compliance and Legal

##### Regulatory

In April 2014, the European Commission announced its decision regarding its investigation of anticompetitive practices in the cables industry and granted the Company full immunity from fines under its leniency program.

In February 2019, the Brazilian Antitrust Authority (CADE) announced its decision regarding its investigation of anticompetitive practices in certain power businesses of the Company, including flexible alternating current transmission systems (FACTS) and power transformers, and granted the Company full immunity from fines under its leniency program.

As a result of an internal investigation, the Company self-reported to the Securities and Exchange Commission (SEC) and the Department of Justice (DoJ) in the United States as well as to the Serious Fraud Office (SFO) in the United Kingdom concerning certain of its past dealings with Unaoil and its subsidiaries, including alleged improper payments made by these entities to third parties. The SFO has commenced an investigation into this matter. The Company is cooperating fully with the authorities. At this time, it is not possible for the Company to make an informed judgment about the outcome of these matters.

Based on findings during an internal investigation, the Company self-reported to the SEC and the DoJ, to various authorities in South Africa and other countries as well as to certain multilateral financial institutions potential suspect payments and other compliance concerns in connection with some of the Company's dealings with Eskom and related persons. Many of those parties have expressed an interest in, or commenced an investigation into, these matters and the Company is cooperating fully with them. At this time, it is not possible for the Company to make an informed judgment about the outcome of these matters.

##### General

The Company is aware of proceedings, or the threat of proceedings, against it and others in respect of private claims by customers and other third parties with regard to certain actual or alleged anticompetitive practices. Also, the Company is subject to other claims and legal proceedings, as well as investigations carried out by various law enforcement authorities. With respect to the above-mentioned claims, regulatory matters, and any related proceedings, the Company will bear the related costs, including costs necessary to resolve them.

#### Liabilities recognized

At March 31, 2019, and December 31, 2018, the Company had aggregate liabilities of \$217 million and \$221 million, respectively, included in “Other provisions” and “Other non-current liabilities”, for the above regulatory, compliance and legal contingencies, and none of the individual liabilities recognized was significant. As it is not possible to make an informed judgment on, or reasonably predict, the outcome of certain matters and as it is not possible, based on information currently available to management, to estimate the maximum potential liability on other matters, there could be material adverse outcomes beyond the amounts accrued.

#### Guarantees

##### General

The following table provides quantitative data regarding the Company’s third-party guarantees. The maximum potential payments represent a “worst-case scenario”, and do not reflect management’s expected outcomes.

Maximum potential payments (\$ in millions)	March 31, 2019	December 31, 2018
Performance guarantees	1,567	1,584
Financial guarantees	8	10
Indemnification guarantees	65	64
<b>Total<sup>(1)</sup></b>	<b>1,640</b>	<b>1,658</b>

(1) Maximum potential payments include amounts in both continuing and discontinued operations.

The carrying amount of liabilities recorded in the Consolidated Balance Sheets reflects the Company’s best estimate of future payments, which it may incur as part of fulfilling its guarantee obligations. In respect of the above guarantees, the carrying amounts of liabilities at March 31, 2019, and December 31, 2018, were not significant.

The Company is party to various guarantees providing financial or performance assurances to certain third parties. These guarantees, which have various maturities up to 2027, mainly consist of performance guarantees whereby (i) the Company guarantees the performance of a third party’s product or service according to the terms of a contract and (ii) as member of a consortium/joint-venture that includes third parties, the Company guarantees not only its own performance but also the work of third parties. Such guarantees may include guarantees that a project will be completed within a specified time. If the third party does not fulfill the obligation, the Company will compensate the guaranteed party in cash or in kind. The original maturity dates for the majority of these performance guarantees range from one to eight years.

In conjunction with the divestment of the high-voltage cable and cables accessories businesses, the Company has entered into various performance guarantees with other parties with respect to certain liabilities of the divested business. At March 31, 2019 and December 31, 2018, the maximum potential payable under these guarantees amounts to \$755 million and \$771 million, respectively, and these guarantees have various maturities ranging from one to ten years.

#### Commercial commitments

In addition, in the normal course of bidding for and executing certain projects, the Company has entered into standby letters of credit, bid/performance bonds and surety bonds (collectively “performance bonds”) with various financial institutions. Customers can draw on such performance bonds in the event that the Company does not fulfill its contractual obligations. The Company would then have an obligation to reimburse the financial institution for amounts paid under the performance bonds. At March 31, 2019, and December 31, 2018, the total outstanding performance bonds aggregated to \$7.2 billion and \$7.4 billion, respectively, of which \$4.1 billion and \$4.3 billion, respectively, relate to discontinued operations. There have been no significant amounts reimbursed to financial institutions under these types of arrangements in the three months ended March 31, 2019 and 2018.

#### Product and order-related contingencies

The Company calculates its provision for product warranties based on historical claims experience and specific review of certain contracts. The reconciliation of the “Provisions for warranties”, including guarantees of product performance, was as follows:

(\$ in millions)	2019	2018
<b>Balance at January 1,</b>	<b>948</b>	<b>909</b>
Net change in warranties due to acquisitions and divestments <sup>(1)</sup>	14	–
Claims paid in cash or in kind	(68)	(58)
Net increase in provision for changes in estimates, warranties issued and warranties expired	51	40
Exchange rate differences	(8)	21
<b>Balance at March 31,</b>	<b>937</b>	<b>912</b>

(1) Includes adjustments to the initial purchase price allocation recorded during the measurement period

## Note 9

### Contract assets and liabilities

The following table provides information about Contract Assets and Contract Liabilities:

(\$ in millions)	March 31, 2019	December 31, 2018	March 31, 2018
Contract assets	1,094	1,082	1,213
Contract liabilities	1,690	1,707	1,742

Contract assets primarily relate to the Company’s right to receive consideration for work completed but for which no invoice has been issued at the reporting date. Contract assets are transferred to receivables when rights to receive payment become unconditional.



Contract liabilities primarily relate to up-front advances received on orders from customers as well as amounts invoiced to customers in excess of revenues recognized predominantly on long-term projects. Contract liabilities are reduced as work is performed and as revenues are recognized.

The significant changes in the Contract assets and Contract liabilities balances were as follows:

(\$ in millions)	Three months ended March 31,			
	2019		2018	
	Contract assets	Contract liabilities	Contract assets	Contract liabilities
Revenue recognized, which was included in the Contract liabilities balance at Jan 1, 2019/2018	–	(420)	–	(490)
Additions to Contract liabilities - excluding amounts recognized as revenue during the period	–	406	–	426
Receivables recognized that were included in the Contract asset balance at Jan 1, 2019/2018	(311)	–	(332)	–

At March 31, 2019, the Company had unsatisfied performance obligations totaling \$13,853 million and, of this amount, the Company expects to fulfill approximately 69 percent of the obligations in 2019, approximately 19 percent of the obligations in 2020 and the balance thereafter.

## Note 10

### Debt

The Company's total debt at March 31, 2019, and December 31, 2018, amounted to \$8,518 million and \$8,618 million, respectively.

#### Short-term debt and current maturities of long-term debt

The Company's "Short-term debt and current maturities of long-term debt" consisted of the following:

(\$ in millions)	March 31, 2019	December 31, 2018
Short-term debt	1,423	561
Current maturities of long-term debt	45	1,470
<b>Total</b>	<b>1,468</b>	<b>2,031</b>

Short-term debt primarily represented issued commercial paper and short-term loans from various banks. At March 31, 2019, and December 31, 2018, \$753 million and \$292 million, respectively, was outstanding under the \$2 billion commercial paper program in the United States. In addition, at March 31, 2019, and December 31, 2018, \$505 million and \$172 million was outstanding under the \$2 billion Euro-commercial paper program.

In March 2019, the Company repaid at maturity its EUR 1,250 million 2.625% Instruments, equivalent to \$1,414 million at date of payment.

#### Long-term debt

The Company's long-term debt at March 31, 2019, and December 31, 2018, amounted to \$7,050 million and \$6,587 million, respectively.

Outstanding bonds (including maturities within the next 12 months) were as follows:

	March 31, 2019				December 31, 2018			
(in millions)	Nominal outstanding		Carrying value <sup>(1)</sup>		Nominal outstanding		Carrying value <sup>(1)</sup>	
Bonds:								
2.625% EUR Instruments, due 2019					EUR	1,250	\$	1,431
2.8% USD Notes, due 2020	USD	300	\$	299	USD	300	\$	299
4.0% USD Notes, due 2021	USD	650	\$	646	USD	650	\$	646
2.25% CHF Bonds, due 2021	CHF	350	\$	368	CHF	350	\$	373
5.625% USD Notes, due 2021	USD	250	\$	264	USD	250	\$	265
2.875% USD Notes, due 2022	USD	1,250	\$	1,252	USD	1,250	\$	1,242
3.375% USD Notes, due 2023	USD	450	\$	448	USD	450	\$	448
0.625% EUR Instruments, due 2023	EUR	700	\$	798	EUR	700	\$	807
0.75% EUR Instruments, due 2024	EUR	750	\$	856	EUR	750	\$	862
0.3% CHF Notes, due 2024	CHF	280	\$	281				–
3.8% USD Notes, due 2028	USD	750	\$	746	USD	750	\$	746
1.0% CHF Notes, due 2029	CHF	170	\$	170				–
4.375% USD Notes, due 2042	USD	750	\$	724	USD	750	\$	723
Total			\$	6,852			\$	7,842

(1) USD carrying values include unamortized debt issuance costs, bond discounts or premiums, as well as adjustments for fair value hedge accounting, where appropriate.

In February 2019, the Company issued the following notes with a principal of:

- CHF 280 million, due 2024, paying interest annually in arrears at a fixed rate of 0.3 percent per annum, and
- CHF 170 million, due 2029, paying interest annually in arrears at a fixed rate of 1.0 percent per annum.

The aggregate net proceeds of these bond issues, after underwriting discount and other fees, amounted to CHF 449 million (equivalent to approximately \$449 million on date of issuance).

#### Subsequent events

In April 2019, the Company issued 18-month floating rate notes with an aggregate principal of EUR 1,000 million, due in October 2020. These notes pay interest quarterly in arrears at a variable interest rate of 35 basis points above the 3-month EURIBOR, with a floor rate of zero. The aggregate net proceeds amounted to EUR 1,002 million (equivalent to approximately \$1,129 million on date of issuance).

## Note 11

### Employee benefits

The Company operates defined benefit pension plans, defined contribution pension plans, and termination indemnity plans, in accordance with local regulations and practices. These plans cover a large portion of the Company's employees and provide benefits to employees in the event of death, disability, retirement, or termination of employment. Certain of these plans are multi-employer plans. The Company also operates other postretirement benefit plans including postretirement health care benefits, and other employee-related benefits for active employees including long-service award plans. The measurement date used for the Company's employee benefit plans is December 31. The funding policies of the Company's plans are consistent with the local government and tax requirements.

The following tables include amounts relating to defined benefit pension plans and other postretirement benefits for both continuing and discontinued operations.

Net periodic benefit cost of the Company's defined benefit pension and other postretirement benefit plans consisted of the following:

(\$ in millions)	Defined pension benefits				Other postretirement	
	Switzerland		International		benefits	
	2019	2018	2019	2018	2019	2018
<b>Three months ended March 31,</b>						
Operational pension cost:						
Service cost	19	23	28	34	–	–
<b>Operational pension cost</b>	<b>19</b>	<b>23</b>	<b>28</b>	<b>34</b>	<b>–</b>	<b>–</b>
Non-operational pension cost (credit):						
Interest cost	4	8	44	51	1	1
Expected return on plan assets	(28)	(30)	(70)	(79)	–	–
Amortization of prior service cost (credit)	(4)	(4)	1	–	(1)	(1)
Amortization of net actuarial loss	–	–	27	24	(1)	–
Curtailments, settlements and special termination benefits	–	–	1	–	–	–
<b>Non-operational pension cost (credit)</b>	<b>(28)</b>	<b>(26)</b>	<b>3</b>	<b>(4)</b>	<b>(1)</b>	<b>–</b>
<b>Net periodic benefit cost</b>	<b>(9)</b>	<b>(3)</b>	<b>31</b>	<b>30</b>	<b>(1)</b>	<b>–</b>

The components of net periodic benefit cost other than the service cost component are included in the line "Non-operational pension (cost) credit" in the income statement. Net periodic benefit cost includes \$10 million and \$11 million, for the three months end March 31, 2019 and 2018, respectively, related to discontinued operations.

Employer contributions were as follows:

(\$ in millions)	Defined pension benefits				Other postretirement	
	Switzerland		International		benefits	
	2019	2018	2019	2018	2019	2018
<b>Three months ended March 31,</b>						
Total contributions to defined benefit pension and other postretirement benefit plans	23	23	24	23	2	2

The Company expects to make contributions totaling approximately \$200 million and \$11 million to its defined benefit pension plans and other postretirement benefit plans, respectively, for the full year 2019.

## Note 12

### Stockholder's equity

In February 2019, the Company announced that a proposal will be put to the 2019 AGM for approval by the shareholders to distribute 0.80 Swiss francs per share to shareholders.

## Note 13

### Earnings per share

Basic earnings per share is calculated by dividing income by the weighted-average number of shares outstanding during the period. Diluted earnings per share is calculated by dividing income by the weighted-average number of shares outstanding during the period, assuming that all potentially dilutive securities were exercised, if dilutive. Potentially dilutive securities comprise outstanding written call options, and outstanding options and shares granted subject to certain conditions under the Company's share-based payment arrangements.

Basic earnings per share		
	Three months ended March 31,	
(\$ in millions, except per share data in \$)	2019	2018
Amounts attributable to ABB shareholders:		
Income from continuing operations, net of tax	397	399
Income from discontinued operations, net of tax	138	173
<b>Net income</b>	<b>535</b>	<b>572</b>
<b>Weighted-average number of shares outstanding (in millions)</b>	<b>2,132</b>	<b>2,134</b>
Basic earnings per share attributable to ABB shareholders:		
Income from continuing operations, net of tax	0.19	0.19
Income from discontinued operations, net of tax	0.06	0.08
<b>Net income</b>	<b>0.25</b>	<b>0.27</b>
Diluted earnings per share		
	Three months ended March 31,	
(\$ in millions, except per share data in \$)	2019	2018
Amounts attributable to ABB shareholders:		
Income from continuing operations, net of tax	397	399
Income from discontinued operations, net of tax	138	173
<b>Net income</b>	<b>535</b>	<b>572</b>
Weighted-average number of shares outstanding (in millions)	2,132	2,134
Effect of dilutive securities:		
Call options and shares	2	11
<b>Adjusted weighted-average number of shares outstanding (in millions)</b>	<b>2,134</b>	<b>2,145</b>
Diluted earnings per share attributable to ABB shareholders:		
Income from continuing operations, net of tax	0.19	0.19
Income from discontinued operations, net of tax	0.06	0.08
<b>Net income</b>	<b>0.25</b>	<b>0.27</b>

## Note 14

### Reclassifications out of accumulated other comprehensive loss

The following table shows changes in "Accumulated other comprehensive loss" (OCI) attributable to ABB, by component, net of tax:

(\$ in millions)	Foreign currency translation adjustments	Unrealized gains (losses) on available-for-sale securities	Pension and other postretirement plan adjustments	Unrealized gains (losses) of cash flow hedge derivatives	Total OCI
<b>Balance at January 1, 2018</b>	<b>(2,693)</b>	<b>8</b>	<b>(1,672)</b>	<b>12</b>	<b>(4,345)</b>
Cumulative effect of changes in accounting principles <sup>(1)</sup>	–	(9)	–	–	(9)
Other comprehensive (loss) income:					
Other comprehensive (loss) income before reclassifications	210	(4)	(4)	(21)	181
Amounts reclassified from OCI	–	–	14	11	25
Changes attributable to divestments	(14)	–	–	–	(14)
<b>Total other comprehensive (loss) income</b>	<b>196</b>	<b>(4)</b>	<b>10</b>	<b>(10)</b>	<b>192</b>
Less:					
Amounts attributable to noncontrolling interests	16	–	–	–	16
<b>Balance at March 31, 2018</b>	<b>(2,513)</b>	<b>(5)</b>	<b>(1,662)</b>	<b>2</b>	<b>(4,178)</b>

(\$ in millions)	Foreign currency translation adjustments	Unrealized gains (losses) on available-for-sale securities	Pension and other postretirement plan adjustments	Unrealized gains (losses) of cash flow hedge derivatives	Total OCI
<b>Balance at January 1, 2019</b>	<b>(3,324)</b>	<b>(4)</b>	<b>(1,967)</b>	<b>(16)</b>	<b>(5,311)</b>
Adoption of accounting standard update <sup>(2)</sup>	–	–	(36)	–	(36)
Other comprehensive (loss) income:					
Other comprehensive (loss) income before reclassifications	(45)	4	18	–	(23)
Amounts reclassified from OCI	–	2	15	4	21
<b>Total other comprehensive (loss) income</b>	<b>(45)</b>	<b>6</b>	<b>33</b>	<b>4</b>	<b>(2)</b>
Less:					
Amounts attributable to noncontrolling interests	6	–	–	–	6
<b>Balance at March 31, 2019</b>	<b>(3,375)</b>	<b>2</b>	<b>(1,970)</b>	<b>(12)</b>	<b>(5,355)</b>

(1) Amounts relate to the adoption of two accounting standard updates in 2018 regarding the Recognition and measurement of financial assets and financial liabilities.

(2) Amounts relate to the adoption of an accounting standard update in 2019 regarding the Tax Cuts and Jobs Act of 2017. See "Applicable for current period" section of Note 2 for more details.

The following table reflects amounts reclassified out of OCI in respect of Pension and other postretirement plan adjustments:

(\$ in millions)		Three months ended March 31,	
Details about OCI components	Location of (gains) losses reclassified from OCI	2019	2018
Pension and other postretirement plan adjustments:			
Amortization of prior service cost	Non-operational pension (cost) credit <sup>(1)</sup>	(4)	(5)
Amortization of net actuarial loss	Non-operational pension (cost) credit <sup>(1)</sup>	26	24
<b>Total before tax</b>		<b>22</b>	<b>19</b>
Tax	Provision for taxes	(7)	(5)
<b>Amounts reclassified from OCI</b>		<b>15</b>	<b>14</b>

(1) Amounts include a total of \$3 million, for both the three months ended March 31, 2019 and 2018, reclassified from OCI to Income from discontinued operations (see Note 3).

The amounts in respect of Unrealized gains (losses) on available-for-sale securities and Unrealized gains (losses) of cash flow hedge derivatives were not significant for the three months ended March 31, 2019 and 2018.

## Note 15

### Restructuring and related expenses

#### OS program

In December 2018, the Company announced a two-year restructuring program with the objective of simplifying its business model and structure through the implementation of a new organizational structure driven by its businesses. The program includes the elimination of the country and regional structures within the current matrix organization, including the elimination of the three regional Executive Committee roles. The operating businesses will each be responsible for both their customer-facing activities and business support functions, while the remaining Group-level corporate activities will primarily focus on Group strategy, portfolio and performance management, capital allocation, core technologies and the ABB Ability™ platform. The program is expected to be performed over two years and incur restructuring expenses of \$350 million.

The following table outlines the costs incurred in the three months ended March 31, 2019, the cumulative costs incurred up to March 31, 2019, and the total amount of costs expected to be incurred under the program per operating segment:

(\$ in millions)	Cost incurred	Cumulative net	Total Expected Costs
	Three months ended March 31, 2019	cost incurred up to March 31, 2019	
Electrification Products	(2)	30	40
Industrial Automation	–	21	60
Robotics and Motion	–	1	50
Corporate and Other	1	12	200
<b>Total</b>	<b>(1)</b>	<b>64</b>	<b>350</b>

Of the total expected costs of \$350 million the majority is related to employee severance costs.

In the three months ended March 31, 2019, restructuring expenses (income) recorded for this program relate to employee severance costs and are included in "Total cost of sales". Liabilities associated with this program at March 31, 2019 and December 31, 2018, amount to \$64 million and \$65 million, respectively, and are primarily included in "Other provisions".

#### Other restructuring-related activities

In the three months ended March 31, 2019 and 2018, the Company executed various other restructuring related activities and incurred expenses of \$50 million and \$12 million, respectively. These amounts relate mainly to employee severance costs and are included in the following line items in the Consolidated Income Statements:

(\$ in millions)	Three months ended March 31,	
	2019	2018
Total cost of sales	21	7
Selling, general and administrative expenses	11	1
Non-order related research and development expenses	–	–
Other income (expenses), net	18	4
<b>Total</b>	<b>50</b>	<b>12</b>

## Note 16

### Operating segment data

The Chief Operating Decision Maker (CODM) is the Chief Executive Officer. The CODM allocates resources to and assesses the performance of each operating segment using the information outlined below. The Company is organized into operating segments based on products and services and these operating segments consist of Electrification Products, Industrial Automation, and Robotics and Motion. The remaining operations of the Company are included in Corporate and Other. Following the announcement in December 2018, to sell its Powers Grids business, the Company reclassified the results of operations for this business and certain related amounts previously included in Corporate and Other to discontinued operations (See Note 3). The segment information for the three months ended March 31, 2018 and at December 31, 2018, has been recast to reflect these changes.

A description of the types of products and services provided by each reportable segment is as follows:

- **Electrification Products:** manufactures and sells products and solutions which are designed to provide smarter and safer electrical flow from the substation to the socket. The portfolio of increasingly digital and connected solutions includes electric vehicle charging infrastructure, solar power solutions, modular substation packages, distribution automation products, switchboard and panelboards, switchgear, UPS solutions, circuit breakers, measuring and sensing devices, control products, wiring accessories, enclosures and cabling systems and intelligent home and building solutions, designed to integrate and automate lighting, heating, ventilation, security and data communication networks.



- **Industrial Automation:** develops and sells integrated automation and electrification systems and solutions, such as process and discrete control solutions, advanced process control software and manufacturing execution systems, sensing, measurement and analytical instrumentation and solutions, electric ship propulsion systems, as well as solutions for modern machine and factory automation and large turbochargers. In addition, the division offers a comprehensive range of services ranging from repair to advanced services such as remote monitoring, preventive maintenance and cybersecurity services.
- **Robotics and Motion:** manufactures and sells robotics, motors, generators, drives, wind converters, components and systems for railways and related services and digital solutions for a wide range of applications in industry, transportation and infrastructure, and utilities.
- **Corporate and Other:** includes headquarters, central research and development, the Company's real estate activities, Group Treasury Operations, historical operating activities of certain divested businesses and other non-core operating activities.

The primary measure of profitability on which the operating segments are evaluated is Operational EBITA, which represents income from operations excluding:

- amortization expense on intangibles arising upon acquisitions (acquisition-related amortization),
- restructuring, related and implementation costs,
- changes in the amount recorded for obligations related to divested businesses occurring after the divestment date (changes in obligations related to divested businesses),
- changes in estimates relating to opening balance sheets of acquired businesses (changes in pre-acquisition estimates),
- gains and losses from sale of businesses,
- acquisition- and divestment-related expenses and integration costs,
- certain other non-operational items, as well as
- foreign exchange/commodity timing differences in income from operations consisting of: (a) unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives), (b) realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized, and (c) unrealized foreign exchange movements on receivables/payables (and related assets/liabilities).

Certain other non-operational items generally includes: certain regulatory, compliance and legal costs, certain asset write downs/impairments as well as other items which are determined by management on a case-by-case basis.

The CODM primarily reviews the results of each segment on a basis that is before the elimination of profits made on inventory sales between segments. Segment results below are presented before these eliminations, with a total deduction for intersegment profits to arrive at the Company's consolidated Operational EBITA. Intersegment sales and transfers are accounted for as if the sales and transfers were to third parties, at current market prices.

The following tables present disaggregated segment revenues from contracts with customers, Operational EBITA, and the reconciliations of consolidated Operational EBITA to Income from continuing operations before taxes for the three months ended March 31, 2019 and 2018, as well as total assets at March 31, 2019, and December 31, 2018.

	Three months ended March 31, 2019				
	Electrification Products	Industrial Automation	Robotics and Motion	Corporate and Other	Total
(\$ in millions)					
<b>Geographical markets</b>					
Europe	983	754	694	16	2,447
The Americas	1,106	392	700	–	2,198
Asia, Middle East and Africa	865	557	705	22	2,149
	2,954	1,703	2,099	38	6,794
<b>End Customer Markets</b>					
Utilities	460	250	149	3	862
Industry	1,151	1,105	1,608	27	3,891
Transport & infrastructure	1,343	348	342	8	2,041
	2,954	1,703	2,099	38	6,794
<b>Product type</b>					
Products	2,577	568	1,531	39	4,715
Systems	140	417	236	(1)	792
Services and other	237	718	332	–	1,287
	2,954	1,703	2,099	38	6,794
Third-party revenues	2,954	1,703	2,099	38	6,794
Intersegment revenues <sup>(1)</sup>	103	35	130	(215)	53
<b>Total Revenues</b>	<b>3,057</b>	<b>1,738</b>	<b>2,229</b>	<b>(177)</b>	<b>6,847</b>

	Three months ended March 31, 2018				
(\$ in millions)	Electrification Products	Industrial Automation	Robotics and Motion	Corporate and Other	Total
Geographical markets					
Europe	937	808	709	22	2,476
The Americas	648	377	684	10	1,719
Asia, Middle East and Africa	800	639	692	56	2,187
	2,385	1,824	2,085	88	6,382
End Customer Markets					
Utilities	573	296	167	62	1,098
Industry	1,051	1,077	1,622	13	3,763
Transport & infrastructure	761	451	296	13	1,521
	2,385	1,824	2,085	88	6,382
Product type					
Products	2,085	639	1,511	16	4,251
Systems	137	464	244	72	917
Services and other	163	721	330	–	1,214
	2,385	1,824	2,085	88	6,382
Third-party revenues	2,385	1,824	2,085	88	6,382
Intersegment revenues <sup>(1)</sup>	109	35	124	(209)	59
Total Revenues	2,494	1,859	2,209	(121)	6,441

(1) Intersegment revenues include sales to the Power Grids business which is presented as discontinued operations and are not eliminated from Total revenues.

(\$ in millions)	Three months ended March 31,	
	2019	2018
<b>Operational EBITA:</b>		
Electrification Products	377	377
Industrial Automation	226	262
Robotics and Motion	337	338
Corporate and Other <sup>(1)</sup>	(174)	(225)
<b>Consolidated Operational EBITA</b>	<b>766</b>	<b>752</b>
Acquisition-related amortization	(68)	(63)
Restructuring, related and implementation costs <sup>(2)</sup>	(68)	(7)
Changes in obligations related to divested businesses	(3)	(7)
Gains and losses from sale of businesses	(1)	(6)
Acquisition- and divestment-related expenses and integration costs	(24)	(25)
Foreign exchange/commodity timing differences in income from operations:		
Unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives)	6	(13)
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	(1)	9
Unrealized foreign exchange movements on receivables/payables (and related assets/liabilities)	16	(9)
Certain other non-operational items:		
Costs for planned divestment of Power Grids	(20)	–
Regulatory, compliance and legal costs	(8)	(3)
Division transformation costs	(3)	(2)
Losses and other (costs) recoveries on Korea fraud	1	(3)
Other non-operational items	(3)	3
<b>Income from operations</b>	<b>590</b>	<b>626</b>
Interest and dividend income	19	22
Interest and other finance expense	(62)	(89)
Non-operational pension (cost) credit	23	27
<b>Income from continuing operations before taxes</b>	<b>570</b>	<b>586</b>

(1) Corporate and Other includes Stranded corporate costs of \$67 million and \$76 million at March 31, 2019 and 2018, respectively.

(2) Amounts in 2019 include \$19 million of implementation costs in relation to the OS program.

(\$ in millions)	Total assets <sup>(1), (2)</sup>	
	March 31, 2019	December 31, 2018
Electrification Products	12,404	12,049
Industrial Automation	6,811	6,669
Robotics and Motion	8,595	8,397
Corporate and Other	17,792	17,326
<b>Consolidated</b>	<b>45,602</b>	<b>44,441</b>

(1) Total assets are after intersegment eliminations and therefore reflect third-party assets only.

(2) Assets held for sale of \$8,982 million and \$8,591 million are included in Corporate and Other at March 31, 2019 and December 31, 2018, respectively (see Note 3).

## 2019 Realignment of segments

On December 17, 2018, the Company announced a reorganization of its operating segments into four customer-focused, entrepreneurial businesses. Effective April 1, 2019:

- the Electrification Products segment was renamed the Electrification segment,
- the Industrial Automation segment remains unchanged except that it now excludes the Machine and Factory Automation business, which has been transferred to the new Robotics and Discrete Automation segment,
- the new Robotics and Discrete Automation segment includes the combined businesses of the Machine and Factory Automation business, previously included in the Industrial Automation segment, and the Robotics business from the former Robotics and Motion segment, and
- the new Motion segment contains the remaining businesses of the former Robotics and Motion segment.



# Supplemental Reconciliations and Definitions

The following reconciliations and definitions include measures which ABB uses to supplement its Consolidated Financial Information (unaudited) which is prepared in accordance with United States generally accepted accounting principles (U.S. GAAP). Certain of these financial measures are, or may be, considered non-GAAP financial measures as defined in the rules of the U.S. Securities and Exchange Commission (SEC).

While ABB's management believes that the non-GAAP financial measures herein are useful in evaluating ABB's operating results, this information should be considered as supplemental in nature and not as a substitute for the related financial information prepared in accordance with U.S. GAAP. Therefore these measures should not be viewed in isolation but considered together with the Consolidated Financial Information (unaudited) prepared in accordance with U.S. GAAP as of and for the three months ended March 31, 2019.

On January 1, 2018, the Company adopted a new accounting standard, Revenue from contracts with customers, and consistent with the method of adoption elected, comparative information for 2017 has not been restated and continues to be reported under the accounting standards previously in effect for that period (see Note 2 to the Consolidated Financial Information). In addition, on January 1, 2019, the Company adopted a new accounting standard for lease accounting. Consistent with the method of adoption elected, comparable information has not been restated to reflect the adoption of this new standard and continues to be measured and reported under the accounting standard in effect for those period presented.

## Comparable growth rates

Growth rates for certain key figures may be presented and discussed on a "comparable" basis. The comparable growth rate measures growth on a constant currency basis. Since we are a global company, the comparability of our operating results reported in U.S. dollars is affected by foreign currency exchange rate fluctuations. We calculate the impacts from foreign currency fluctuations by translating the current-year periods' reported key figures into U.S. dollar amounts using the exchange rates in effect for the comparable periods in the previous year.

Comparable growth rates are also adjusted for changes in our business portfolio. Adjustments to our business portfolio occur due to acquisitions, divestments, or by exiting specific business activities or customer markets. The adjustment for portfolio changes is calculated as follows: where the results of any business acquired or divested have not been consolidated and reported for the entire duration of both the current and comparable periods, the reported key figures of such business are adjusted to exclude the relevant key figures of any corresponding quarters which are not comparable when computing the comparable growth rate. Certain portfolio changes which do not qualify as divestments under U.S. GAAP have been treated in a similar manner to divestments. Changes in our portfolio where we have exited certain business activities or customer markets are adjusted as if the relevant business was divested in the period when the decision to cease business activities was taken. We do not adjust for portfolio changes where the relevant business has annualized revenues of less than \$50 million.

The following tables provide reconciliations of reported growth rates of certain key figures to their respective comparable growth rate.

### Divisional comparable growth rate reconciliation

Division	Q1 2019 compared to Q1 2018							
	Order growth rate				Revenue growth rate			
	US\$ (as reported)	Foreign exchange impact	Portfolio changes	Comparable	US\$ (as reported)	Foreign exchange impact	Portfolio changes	Comparable
Electrification Products	21%	7%	-22%	6%	23%	7%	-25%	5%
Industrial Automation	-11%	6%	0%	-5%	-7%	7%	0%	0%
Robotics and Motion	-1%	6%	0%	5%	1%	6%	0%	7%
<b>ABB Group</b>	<b>1%</b>	<b>6%</b>	<b>-4%</b>	<b>3%</b>	<b>6%</b>	<b>7%</b>	<b>-9%</b>	<b>4%</b>

### Regional comparable growth rate reconciliation

Region	Q1 2019 compared to Q1 2018							
	Order growth rate				Revenue growth rate			
	US\$ (as reported)	Foreign exchange impact	Portfolio changes	Comparable	US\$ (as reported)	Foreign exchange impact	Portfolio changes	Comparable
Europe	-8%	8%	-3%	-3%	-1%	9%	-4%	4%
The Americas	28%	3%	-22%	9%	28%	3%	-25%	6%
Asia, Middle East and Africa	-7%	5%	7%	5%	-2%	6%	-2%	2%
<b>ABB Group</b>	<b>1%</b>	<b>6%</b>	<b>-4%</b>	<b>3%</b>	<b>6%</b>	<b>7%</b>	<b>-9%</b>	<b>4%</b>

**Order backlog growth rate reconciliation**

Division	March 31, 2019 compared to March 31, 2018			
	US\$ (as reported)	Foreign exchange impact	Portfolio changes	Comparable
Electrification Products	28%	8%	-30%	6%
Industrial Automation	-5%	7%	0%	2%
Robotics and Motion	2%	7%	0%	9%
<b>ABB Group</b>	<b>2%</b>	<b>7%</b>	<b>-3%</b>	<b>6%</b>

**Other growth rate reconciliations**

Division	Q1 2019 compared to Q1 2018			
	US\$ (as reported)	Foreign exchange impact	Portfolio changes	Comparable
Large orders	-66%	2%	22%	-42%
Base orders	8%	7%	-9%	6%
Service orders	6%	7%	-7%	6%
Service revenues	6%	7%	-7%	6%

The following information presents a reconciliation of growth rates of orders and revenues for 2018 compared with 2017 on a continuing operations basis.

**Divisional comparable growth rate reconciliation**

Division	Q1 2018 compared to Q1 2017							
	Order growth rate				Revenue growth rate			
	US\$ (as reported)	Foreign exchange impact	Portfolio changes	Comparable	US\$ (as reported)	Foreign exchange impact	Portfolio changes	Comparable
Electrification Products	10%	-7%	0%	3%	9%	-7%	0%	2%
Industrial Automation	26%	-9%	-13%	4%	23%	-9%	-14%	0%
Robotics and Motion	18%	-7%	0%	11%	15%	-7%	0%	8%
<b>ABB Group</b>	<b>21%</b>	<b>-9%</b>	<b>-4%</b>	<b>8%</b>	<b>13%</b>	<b>-8%</b>	<b>-2%</b>	<b>3%</b>

# Operational EBITA margin

## Definition

### Operational EBITA margin

Operational EBITA margin is Operational EBITA as a percentage of Operational revenues.

### Operational EBITA

Operational earnings before interest, taxes and acquisition-related amortization (Operational EBITA) represents Income from operations excluding:

- acquisition-related amortization (as defined below),
- restructuring, related and implementation costs,
- changes in the amount recorded for obligations related to divested businesses occurring after the divestment date (changes in obligations related to divested businesses),
- changes in estimates relating to opening balance sheets of acquired businesses (changes in pre-acquisition estimates),
- gains and losses from sale of businesses,
- acquisition- and divestment-related expenses and integration costs,
- certain other non-operational items, as well as
- foreign exchange/commodity timing differences in income from operations consisting of: (a) unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives), (b) realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized, and (c) unrealized foreign exchange movements on receivables/payables (and related assets/liabilities).

Certain other non-operational items generally includes: certain regulatory, compliance and legal costs, certain asset write downs/impairments as well as other items which are determined by management on a case-by-case basis.

Operational EBITA is our measure of segment profit but is also used by management to evaluate the profitability of the Company as a whole.

### Acquisition-related amortization

Amortization expense on intangibles arising upon acquisitions.

### Restructuring, related and implementation costs

Restructuring, related and implementation costs consists of restructuring and other related expenses, as well as internal and external costs relating to the implementation of group-wide restructuring programs.

### Operational revenues

The Company presents Operational revenues solely for the purpose of allowing the computation of Operational EBITA margin. Operational revenues are total revenues adjusted for foreign exchange/commodity timing differences in total revenues of: (i) unrealized gains and losses on derivatives, (ii) realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized, and (iii) unrealized foreign exchange movements on receivables (and related assets). Operational revenues are not intended to be an alternative measure to Total Revenues, which represent our revenues measured in accordance with U.S. GAAP.

## Reconciliation

The following tables provide reconciliations of consolidated Operational EBITA to Net Income and Operational EBITA Margin by division.

### Reconciliation of consolidated Operational EBITA to Net Income

(\$ in millions)	Three months ended March 31,	
	2019	2018
<b>Operational EBITA</b>	<b>766</b>	<b>752</b>
Acquisition-related amortization	(68)	(63)
Restructuring, related and implementation costs <sup>(1)</sup>	(68)	(7)
Changes in obligations related to divested businesses	(3)	(7)
Gains and losses from sale of businesses	(1)	(6)
Acquisition- and divestment-related expenses and integration costs	(24)	(25)
Certain other non-operational items	(33)	(5)
FX/commodity timing differences in income from operations	21	(13)
<b>Income from operations</b>	<b>590</b>	<b>626</b>
Interest and dividend income	19	22
Interest and other finance expense	(62)	(89)
Non-operational pension (cost) credit	23	27
<b>Income from continuing operations before taxes</b>	<b>570</b>	<b>586</b>
Provision for taxes	(155)	(172)
<b>Income from continuing operations, net of tax</b>	<b>415</b>	<b>414</b>
Income from discontinued operations, net of tax	149	186
<b>Net income</b>	<b>564</b>	<b>600</b>

(1) Amounts in 2019 include \$19 million of implementation costs in relation to the OS program.



## Reconciliation of Operational EBITA margin by division

	Three months ended March 31, 2019				
	Electrification Products	Industrial Automation	Robotics and Motion	Corporate and Other and Intersegment elimination	Consolidated
(\$ in millions, unless otherwise indicated)					
<b>Total revenues</b>	<b>3,057</b>	<b>1,738</b>	<b>2,229</b>	<b>(177)</b>	<b>6,847</b>
Foreign exchange/commodity timing differences in total revenues:					
Unrealized gains and losses on derivatives	(1)	–	(2)	–	(3)
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	–	(4)	(1)	1	(4)
Unrealized foreign exchange movements on receivables (and related assets)	(4)	3	(1)	(2)	(4)
<b>Operational revenues</b>	<b>3,052</b>	<b>1,737</b>	<b>2,225</b>	<b>(178)</b>	<b>6,836</b>
<b>Income (loss) from operations</b>	<b>297</b>	<b>198</b>	<b>325</b>	<b>(230)</b>	<b>590</b>
Acquisition-related amortization	29	20	14	5	68
Restructuring, related and implementation costs	40	5	3	20	68
Changes in obligations related to divested businesses	–	–	–	3	3
Gains and losses from sale of businesses	1	–	–	–	1
Acquisition- and divestment-related expenses and integration costs	22	–	–	2	24
Certain other non-operational items	1	2	3	27	33
Foreign exchange/commodity timing differences in income from operations:					
Unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives)	(7)	4	(5)	2	(6)
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	2	(1)	(1)	1	1
Unrealized foreign exchange movements on receivables/payables (and related assets/liabilities)	(8)	(2)	(2)	(4)	(16)
<b>Operational EBITA</b>	<b>377</b>	<b>226</b>	<b>337</b>	<b>(174)</b>	<b>766</b>
<b>Operational EBITA margin (%)</b>	<b>12.4%</b>	<b>13.0%</b>	<b>15.1%</b>	<b>n.a.</b>	<b>11.2%</b>

In the three months ended March 31, 2019, Certain other non-operational items in table above includes the following:

	Three months ended March 31, 2019				
	Electrification Products	Industrial Automation	Robotics and Motion	Corporate and Other	Consolidated
(\$ in millions, unless otherwise indicated)					
<b>Certain other non-operational items:</b>					
Costs for planned divestment of Power Grids	–	–	–	20	20
Regulatory, compliance and legal costs	–	–	–	8	8
Division transformation costs	–	–	3	–	3
Losses and other costs (recoveries) on Korea fraud	–	–	–	(1)	(1)
Other non-operational items	1	2	–	–	3
<b>Total</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>27</b>	<b>33</b>

	Three months ended March 31, 2018				
	Electrification	Industrial	Robotics	Corporate and Other and Intersegment	
(\$ in millions, unless otherwise indicated)	Products	Automation	and Motion	elimination	Consolidated
<b>Total revenues</b>	<b>2,494</b>	<b>1,859</b>	<b>2,209</b>	<b>(121)</b>	<b>6,441</b>
Foreign exchange/commodity timing differences in total revenues:					
Unrealized gains and losses on derivatives	(4)	(4)	4	8	4
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	–	3	–	(11)	(8)
Unrealized foreign exchange movements on receivables (and related assets)	(2)	–	(3)	8	3
<b>Operational revenues</b>	<b>2,488</b>	<b>1,858</b>	<b>2,210</b>	<b>(116)</b>	<b>6,440</b>
<b>Income (loss) from operations</b>	<b>325</b>	<b>237</b>	<b>313</b>	<b>(249)</b>	<b>626</b>
Acquisition-related amortization	20	23	16	4	63
Restructuring, related and implementation costs	4	2	4	(3)	7
Changes in obligations related to divested businesses	–	–	–	7	7
Gains and losses from sale of businesses	–	3	–	3	6
Acquisition- and divestment-related expenses and integration costs	24	1	–	–	25
Certain other non-operational items	(2)	–	1	6	5
Foreign exchange/commodity timing differences in income from operations:					
Unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives)	6	(8)	2	13	13
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	–	2	–	(11)	(9)
Unrealized foreign exchange movements on receivables/payables (and related assets/liabilities)	–	2	2	5	9
<b>Operational EBITA</b>	<b>377</b>	<b>262</b>	<b>338</b>	<b>(225)</b>	<b>752</b>
<b>Operational EBITA margin (%)</b>	<b>15.2%</b>	<b>14.1%</b>	<b>15.3%</b>	<b>n.a.</b>	<b>11.7%</b>

In the three months ended March 31, 2018, Certain other non-operational items in table above includes the following:

	Three months ended March 31, 2018				
	Electrification	Industrial	Robotics	Corporate	
(\$ in millions, unless otherwise indicated)	Products	Automation	and Motion	and Other	Consolidated
<b>Certain other non-operational items:</b>					
Regulatory, compliance and legal costs	–	–	–	3	3
Division transformation costs	–	–	1	1	2
Losses and other costs (recoveries) on Korea fraud	–	–	–	3	3
Other non-operational items	(2)	–	–	(1)	(3)
<b>Total</b>	<b>(2)</b>	<b>–</b>	<b>1</b>	<b>6</b>	<b>5</b>

# Operational EPS

## Definition

### Operational EPS

Operational EPS is calculated as Operational net income divided by the weighted-average number of shares outstanding used in determining basic earnings per share.

### Operational net income

Operational net income is calculated as Net income attributable to ABB adjusted for the following:

- (i) acquisition-related amortization,
- (ii) restructuring, related and implementation costs
- (iii) non-operational pension cost (credit),
- (iv) changes in obligations related to divested businesses,
- (v) changes in pre-acquisition estimates,
- (vi) gains and losses from sale of businesses,
- (vii) acquisition- and divestment-related expenses and integration costs,
- (viii) certain other non-operational items,
- (ix) foreign exchange/commodity timing differences in income from operations consisting of: (a) unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives), (b) realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized, and (c) unrealized foreign exchange movements on receivables/payables (and related assets/liabilities), and
- (x) The amount of income tax on operational adjustments either estimated using the Adjusted Group effective tax rate or in certain specific cases, computed using the actual income tax effects of the relevant item in (i) to (ix) above.

### Acquisition-related amortization

Amortization expense on intangibles arising upon acquisitions.

### Restructuring, related and implementation costs

Restructuring, related and implementation costs consists of restructuring and other related expenses, as well as internal and external costs relating to the implementation of group-wide restructuring programs.

### Adjusted Group effective tax rate

The Adjusted Group effective tax rate is computed by dividing an adjusted provision for taxes by an adjusted income from continuing operations before taxes. Certain amounts recorded in income from continuing operations before taxes and the related provision for taxes (primarily gains and losses from sale of businesses) are excluded from the computation.

### Constant currency Operational EPS adjustment and Operational EPS growth rate (constant currency)

In connection with ABB's 2015-2020 targets, Operational EPS growth is measured assuming 2014 as the base year and uses constant exchange rates. We compute the constant currency operational net income for all periods using the relevant monthly exchange rates which were in effect during 2014 and any difference in computed Operational net income is divided by the relevant weighted-average number of shares outstanding to identify the constant currency Operational EPS adjustment.

## Reconciliation

(\$ in millions, except per share data in \$)	Three months ended March 31,		
	2019	2018	Growth <sup>(3)</sup>
<b>Net income (attributable to ABB)</b>	<b>535</b>	<b>572</b>	
Operational adjustments:			
Acquisition-related amortization	68	63	
Restructuring, related and implementation costs <sup>(1)</sup>	68	7	
Non-operational pension cost (credit)	(23)	(27)	
Changes in obligations related to divested businesses	3	7	
Gains and losses from sale of businesses	1	6	
Acquisition- and divestment-related expenses and integration costs	24	25	
Certain other non-operational items	33	5	
FX/commodity timing differences in income from operations	(21)	13	
Operational adjustments in discontinued operations	6	36	
Tax on operational adjustments <sup>(2)</sup>	(42)	(38)	
<b>Operational net income</b>	<b>652</b>	<b>669</b>	<b>-3%</b>
<b>Weighted-average number of shares outstanding (in millions)</b>	<b>2,132</b>	<b>2,134</b>	
<b>Operational EPS</b>	<b>0.31</b>	<b>0.31</b>	<b>-3%</b>
Constant currency Operational EPS adjustment	0.05	0.04	
<b>Operational EPS (constant currency basis - 2014 exchange rates)</b>	<b>0.36</b>	<b>0.35</b>	<b>5%</b>

(1) Amounts in 2019 include \$19 million of implementation costs in relation to the OS program.

(2) Tax amount is computed by applying the Adjusted Group effective tax rate to the operational adjustments, except for gains and losses from sale of businesses for which the actual provision for taxes resulting from the gain or loss has been computed.

(3) Growth is computed using unrounded EPS amounts.

## Net debt

### Definition

#### Net debt

Net debt is defined as Total debt less Cash and marketable securities.

#### Total debt

Total debt is the sum of Short-term debt and current maturities of long-term debt, and Long-term debt.

#### Cash and marketable securities

Cash and marketable securities is the sum of Cash and equivalents, and Marketable securities and short-term investments.

### Reconciliation

(\$ in millions)	March 31, 2019	December 31, 2018
Short-term debt and current maturities of long-term debt	1,468	2,031
Long-term debt	7,050	6,587
<b>Total debt</b>	<b>8,518</b>	<b>8,618</b>
Cash and equivalents	2,734	3,445
Marketable securities and short-term investments	833	712
<b>Cash and marketable securities</b>	<b>3,567</b>	<b>4,157</b>
<b>Net debt</b>	<b>4,951</b>	<b>4,461</b>

## Net working capital as a percentage of revenues

### Definition

#### Net working capital as a percentage of revenues

Net working capital as a percentage of revenues is calculated as Net working capital divided by Adjusted revenues for the trailing twelve months.

#### Net working capital

Net working capital is the sum of (i) receivables, net, (ii) contract assets, (iii) inventories, net, and (iv) prepaid expenses; less (v) accounts payable, trade, (vi) contract liabilities, and (vii) other current liabilities (excluding primarily: (a) income taxes payable, (b) current derivative liabilities, and (c) pension and other employee benefits); and including the amounts related to these accounts which have been presented as either assets or liabilities held for sale but excluding any amounts included in discontinued operations.

#### Adjusted revenues for the trailing twelve months

Adjusted revenues for the trailing twelve months includes total revenues recorded by ABB in the twelve months preceding the relevant balance sheet date adjusted to eliminate revenues of divested businesses and the estimated impact of annualizing revenues of certain acquisitions which were completed in the same trailing twelve-month period.

### Reconciliation

(\$ in millions, unless otherwise indicated)	March 31, 2019	March 31, 2018
<b>Net working capital:</b>		
Receivables, net	6,499	6,027
Contract assets	1,094	1,213
Inventories, net	4,459	4,085
Prepaid expenses	252	282
Accounts payable, trade	(4,081)	(3,710)
Contract liabilities	(1,690)	(1,742)
Other current liabilities <sup>(1)</sup>	(3,323)	(2,805)
<b>Net working capital</b>	<b>3,210</b>	<b>3,350</b>
<b>Total revenues for the three months ended:</b>		
March 31, 2019 / 2018	6,847	6,441
December 31, 2018 / 2017	7,395	6,804
September 30, 2018 / 2017	7,095	6,486
June 30, 2018 / 2017	6,731	6,187
Adjustment to annualize/eliminate revenues of certain acquisitions/divestments	495	95
<b>Adjusted revenues for the trailing twelve months</b>	<b>28,563</b>	<b>26,013</b>
<b>Net working capital as a percentage of revenues (%)</b>	<b>11.2%</b>	<b>12.9%</b>

(1) Amounts exclude \$568 million and \$540 million at March 31, 2019 and 2018, respectively, related primarily to (a) income taxes payable, (b) current derivative liabilities, and (c) pension and other employee benefits.

## Free cash flow conversion to net income

### Definition

#### Free cash flow conversion to net income

Free cash flow conversion to net income is calculated as adjusted free cash flow divided by Net income attributable to ABB.

#### Adjusted free cash flow

Adjusted free cash flow is calculated as net cash provided by operating activities adjusted for: (i) purchases of property, plant and equipment and intangible assets, (ii) proceeds from sales of property, plant and equipment, and (iii) changes in financing and other non-current receivables, net (included in other investing activities).

#### Free cash flow for the trailing twelve months

Free cash flow for the trailing twelve months includes adjusted free cash flow recorded by ABB in the twelve months preceding the relevant balance sheet date.

#### Net income for the trailing twelve months

Net income for the trailing twelve months includes net income recorded by ABB in the twelve months preceding the relevant balance sheet date.

#### Free cash flow conversion to net income

(\$ in millions, unless otherwise indicated)	Twelve months to	
	March 31, 2019	December 31, 2018
<b>Net cash provided by operating activities</b>	<b>3,186</b>	<b>2,924</b>
Adjusted for the effects of:		
Continuing operations:		
Purchases of property, plant and equipment and intangible assets	(788)	(772)
Proceeds from sale of property, plant and equipment	96	72
Changes in financing receivables and other non-current receivables	(5)	(8)
Discontinued operations:		
Purchases of property, plant and equipment and intangible assets	(197)	(201)
Proceeds from sale of property, plant and equipment	6	8
Changes in financing receivables and other non-current receivables	1	1
<b>Adjusted free cash flow</b>	<b>2,299</b>	<b>2,024</b>
<b>Net income attributable to ABB</b>	<b>2,136</b>	<b>2,173</b>
<b>Free cash flow conversion to net income</b>	<b>108%</b>	<b>93%</b>

#### Reconciliation of the trailing twelve months to March 31, 2019

(\$ in millions)	Continuing operations				Discontinued operations			Net income attributable to ABB
	Net cash provided by operating activities	Purchases of property, plant and equipment and intangible assets	Proceeds from sale of property, plant and equipment	Changes in financing receivables and other non-current receivables	Purchases of property, plant and equipment and intangible assets	Proceeds from sale of property, plant and equipment	Changes in financing receivables and other non-current receivables	
Q2 2018	1,010	(154)	18	–	(43)	1	1	681
Q3 2018	565	(192)	7	(6)	(47)	1	–	603
Q4 2018	1,867	(235)	23	(1)	(64)	4	–	317
Q1 2019	(256)	(207)	48	2	(43)	–	–	535
<b>Total for the trailing twelve months to March 31, 2019</b>	<b>3,186</b>	<b>(788)</b>	<b>96</b>	<b>(5)</b>	<b>(197)</b>	<b>6</b>	<b>1</b>	<b>2,136</b>

## Finance net

### Definition

Finance net is calculated as Interest and dividend income less Interest and other finance expense.

#### Reconciliation

(\$ in millions)	Three months ended March 31,	
	2019	2018
Interest and dividend income	19	22
Interest and other finance expense	(62)	(89)
<b>Finance net</b>	<b>(43)</b>	<b>(67)</b>

## Book-to-bill ratio

### Definition

Book-to-bill ratio is calculated as Orders received divided by Total revenues.

### Reconciliation

(\$ in millions, unless otherwise indicated)	Three months ended March 31,	
	2019	2018
Orders received	7,613	7,555
Total revenues	6,847	6,441
<b>Book-to-bill ratio</b>	<b>1.11</b>	<b>1.17</b>

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